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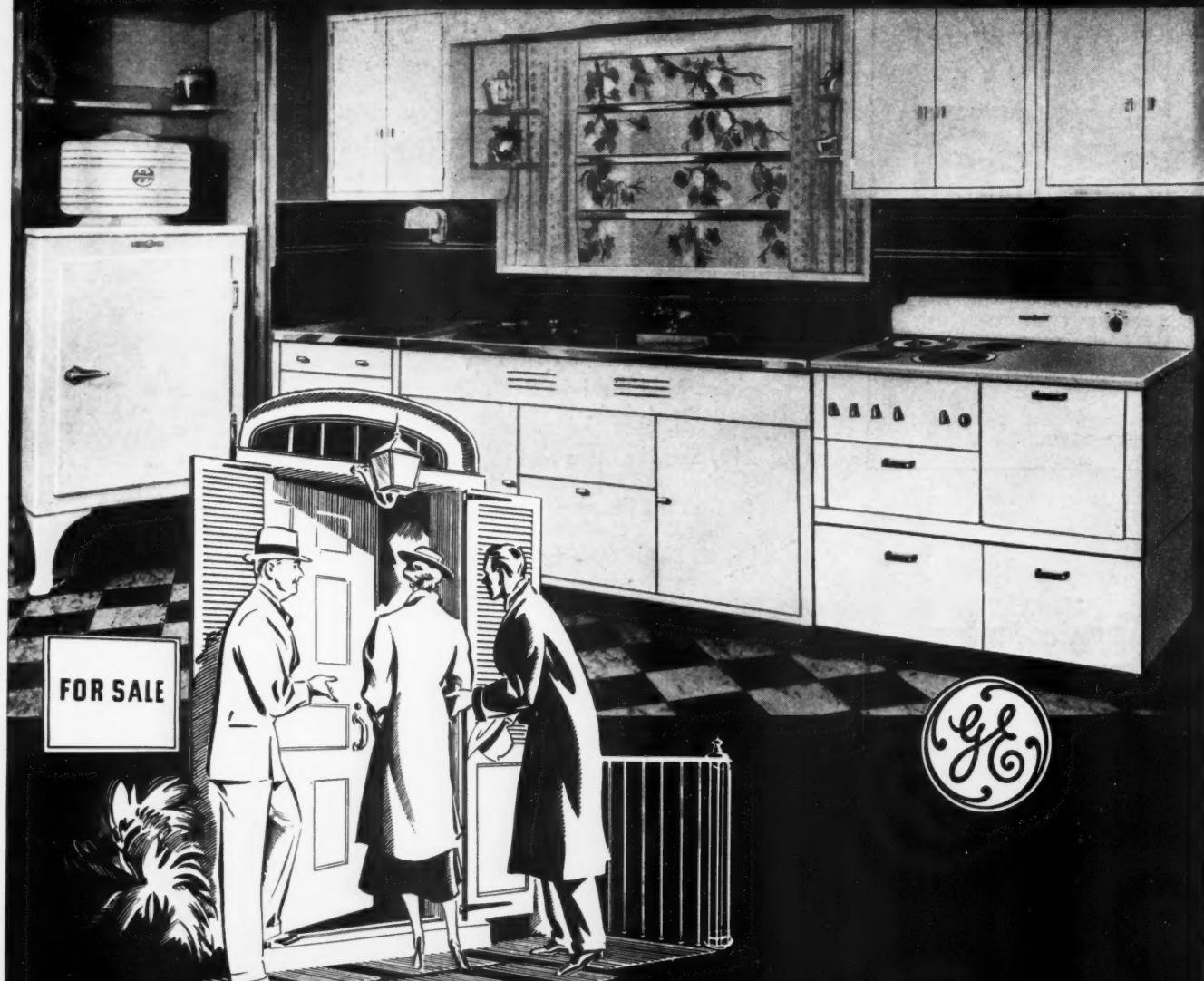
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SHOW THEM THIS KITCHEN



IT WILL HELP SELL THE HOME

WOMEN with a never-to-be-forgotten impression of the General Electric Kitchen are coming around to see your homes. You will find these women truly modern—they want beauty, comfort and electrical efficiency in the kitchen—they are *electric kitchen conscious*. Since they have seen, heard or read about the General Electric Kitchen—and millions have—they will never be really satisfied with any kitchen less attractive and convenient. Install General Electric Kitchens and you will

"atmosphere" your homes in the modern 1935 manner—placing upon them new value, new interest, new desire for ownership. This great selling agent will help you remove "for sale" signs from your properties. Write the General Electric Kitchen Planning Division for free information on model plans and specifications. There is no obligation. Address General Electric Company, Specialty Appliance Sales Department, Section CW4, Nela Park, Cleveland, Ohio.

GENERAL ELECTRIC KITCHEN

"Share the Wealth"— or Increase Production?

THOSE publicly discussing the problems of the depression are becoming sharply divided into "conservatives" and "radicals."

It is less important what they are called than what they stand for.

The real issue between them is whether the government policies adopted shall have as their principal immediate purpose (1) an increase in the national wealth and income, or (2) a radical change in the way the national wealth and income are divided.

The goods and services of all kinds produced in 1929 provided the American people with a total income of *ninety* billion dollars. The goods and services produced during the last three years have provided the entire people with an average annual income of only *forty* billion dollars.

OBVIOUSLY we cannot divide, either fairly or unfairly, a much larger national income until there is a great increase in the total goods and services produced, because production is the sole source of all wealth and income.

Therefore, we can talk and legislate until doomsday about "sharing our wealth," changing the division of the national income and providing security, and still we will all be poorer than formerly, and millions will remain unemployed and on relief, unless and until government, business and labor, together or separately, adopt the measures necessary to increase production.

Doubtless the "radicals" are right in advocating a less unequal distribution of income. But the "conservatives" are certainly right in contending that any policy, by whomever advocated, or however *well-intended*, that delays the full restoration of production, is utterly inimical to the welfare of all, and especially of those with small incomes or unemployed.

HOW, then, increase production? All experience, especially that of the last two years, shows there is only one way. *Production is due to the joint employment of capital and labor. Capital must go to work in order to put labor to work.* There is plenty of capital, but most of those owning it are afraid to put it to work in private business lest there be a continuance of radical and destructive attacks on capital.

Labor will not work unless confident it will be paid. *But neither will capital.* The "conservatives" are right in favoring policies that will encourage all private capital to go to work. The national income during the last three years has averaged only \$320 per year, or *less than 90 cents a day*, per person. You simply can't divide that much income in any way that will provide "abundance" for a vast majority of the people. You can provide abundance for them only by vastly increasing the amount of goods and services produced; and you can do that only by encouraging all the private capital in the country to go to work, and thereby to put all the labor to work.

Samuel O. Drumm,
CHAIRMAN,
AMERICAN BUILDER PUBLISHING CORPORATION
SIMMONS-BOARDMAN PUBLISHING CORPORATION

MORE
SALES

with the help of STUCCO



MORE sales for the building tenant, more jobs for the contractor and architect who do the good job, readier occupancy and better rental or sale for the building owner and his realtor—these are modernizing results economically obtained with stucco made of Atlas White portland cement.

Atlas White stucco (*prepared stucco is preferred*) is actually a thin wall of solid, white concrete when in place. It is easily and quickly applied to any type of building exterior. It is applied in exactly the right texture to fit the architectural design and is prepared in any color—pure white as in the structure pictured here, in pastel tints, or in bright shades of red and green and blue. Weathering mellows and makes even more beautiful its colorful finish. It requires little or no maintenance. And because it is made of *portland cement*, it is strong, sturdy, firesafe and durable.

Stucco contractors will be glad to give complete information on Atlas White stucco. Or write Universal Atlas Cement Co., Subsidiary of United States Steel Corporation, 208 South La Salle Street, Chicago.



At top—This is the way the office and warehouse building of the J. S. Schirm Commercial Co., San Diego, looks today, after remodeling with Mission stucco made with Atlas White. Herman Louis Bodner was the architect. Clark and Scholbraid were plastering contractors. Both of San Diego.

Directly above—The same building before remodeling.

208

STUCCO made with ATLAS WHITE
PORTLAND CEMENT

AMERICAN BUILDER AND BUILDING AGE

Better Homes for Less

In all the talk about cutting building costs, the biggest item of extra expense is seldom mentioned. Wage scales are discussed and material prices are criticized; but the wasteful and costly habit of *making changes* in the plans and specifications after the building is started gets no serious attention. It is not bona fide cost items that so often make the final figure so much higher than the estimates, but EXTRAS; and these are usually due either to careless and incomplete planning or to the "owner's" changeable ideas.

Incompetence in planning and deficiencies in specifying have made the average home building job such a gamble that the man-about-to-build is regarded by his friends as either reckless or crazy. Yet the fault is often his own, or his wife's. Whoever insists on changes *after the building is started* must accept the responsibility for the higher costs.

Of course, the way for contractor-builders to avoid most of the changes that give home building such a bad reputation is to take extra care in the planning and specifying to include everything and to cover every point, so that there will be no real need for changing doors, adding closets or doing any of those customary things which, "on second thought," seem preferable. Plan the job right at the start and then stick by it! Save your clients those *extras* and establish a reputation for building within the estimated cost.

FHA Puts Premium on Forethought

One of the best services which FHA is rendering the building industry comes from its insistence that complete plans and specifications must be filed with the application for an insured mortgage loan. This means that these FHA jobs will be thoroughly thought through, built on paper, and mentally lived in before ground is broken or a nail driven. The builders who take full advantage of this opportunity not only will save their clients the big expense of extras but also will save them a substantial amount on the cost of all needed home equipment, such as heating plant, plumbing, electric fixtures, etc., by specifying all these items in advance and getting them under the 5 per cent 20-year first mortgage instead of leaving these necessary items to be figured out later on by others and purchased on short term, high rate installments.

Better homes for less will result from careful and complete advance planning of every detail. The buying

public is asking for bigger values today. Readers of this publication can deliver these values if they will make sure that no "extras" are needed to make their jobs complete and modern in every respect.

VALUE, NOT COST, FIXES SELLING PRICE

THE breakdown of the price fixing theory attempted under NRA codes has again taught the economic truth that, for consumption goods at least, it is value and not cost that determines the price at which commodities sell.

The new-thought plan of setting the price of every commodity at such a point as to guarantee to every factor engaged in its production and distribution a proper and satisfactory profit has bumped squarely against the fact that the buyer knows or cares little of costs, but is thinking only of value to himself when he goes into the market to satisfy his needs. He fixes the price by his refusal to buy if the price asked is not satisfactory to him.

This relationship between price and value, so well recognized by merchants and manufacturers of food, clothing, motor cars and luxury goods, is strangely ignored in the field of building construction, more particularly home building.

The price asked and paid for a new house is the sum of all the costs entering into its creation, regardless of their fairness: improved plot, financing, construction materials (including freight and warehousing), labor (including allowances for idle time), superintendence and contractors' profits, architects' and other fees, special assessments and taxes! Whatever these amount to is the price, take it or leave it.

Piling It On

The building industry has been the outstanding example of the folly of pricing by the summation of costs process. Little thought has been given either by labor leaders or by building contractors to that vitally controlling matter of the VALUE of their product to the prospective consumer.

Perhaps what is needed in many communities to get home building going in volume is first to set the price at what buyers are willing to pay, and then to work back all along the line to set up only such costs as will

permit building service to be offered at that acceptable price based on value to the buyer and owner.

Many factors of home building cost are at satisfactory levels today; a start has been made. More continuous employment for labor, better job management, and pricing for volume will help to restore investment in a home to its premier place in the wealth and security program of the thrifty American family.

MODIFY THE RULES!

BOTH editorially and by direct correspondence this publication has urged Federal Housing Administrator Moffett to broaden the FHA regulations under Title II in such a way that private investors would be permitted to acquire insured first mortgages from the banks and other loaning institutions which, as mortgagees under the Act, are authorized to create such mortgages.

It seems evident that some market for these prime securities must be opened to these financing institutions, or they will soon freeze their liquid funds. The National Mortgage Associations which were expected to absorb these insured mortgages are not being organized. In the meantime the 1935 home building season is here and the building money needed and promised is not obtainable. The banks have "signed up" with FHA, but don't seem willing as yet to "put up" the money. They naturally hesitate to freeze their funds without seeing any market for these mortgages under the Rules as they now stand.

The attitude of the Housing Administration officials toward our proposal is expressed in the following letter from Deputy Administrator J. Howard Ardrey to the Editor of AMERICAN BUILDER under date of Feb. 9:

"Your letter of February 1st to the Administrator was acknowledged by his Secretary and referred to this office for reply.

"The suggestions you make with reference to broadening the market for insured mortgages are unquestionably worthy of most careful consideration. This may be admitted so freely because the Administration has been giving a great deal of earnest thought to putting those suggestions into effect. There are obstacles, however, which arise from the provisions of the Act, itself, and while it should not be said that we have unsuccessfully sought means to circumvent those obstacles, nevertheless it is believed that until we have exhausted every effort to create National Mortgage Associations and to make them function, the framework of the regulations, designed to that end, should not be altered. In other words, the insured mortgage should be designed for the portfolio of institutional investors and/or to be the basis for the debenture issue of National Mortgage Associations.

"We have given consideration and are continuing to give consideration to the concurrent marketing of insured mortgages with the public and with the Associations, but pending the outcome of the Associations, through the amendment to the RFC Act and the National Housing Act, the Administration will probably not alter the regulations, but will continue to explore the possibilities of a broader market for insured mortgages as involved in the suggestions outlined in your letter.

"Your continued interest and co-operation are much appreciated, and the thoughtful consideration you have given the subject as reflected in your letter will carry weight in our further examination of the suggestions."

The AMERICAN BUILDER is for any plan that will work—and work promptly. The urgent demand for building money for this Spring building season should spur FHA to redoubled action on Titles II and III.

BUY, BUILD, REMODEL—NOW

FROM every part of the country word comes of increasing rentals, of strengthening real estate values and of growing shortages in desirable housing. All of which means that "the turn" in the residential market has been made, and that those who delay longer to buy, build or remodel will have to pay a higher price.

Also there is much talk among the economic theorists of "inflation" and of the fact that if inflation comes and the buying power of the dollar becomes less the usable and income value of the owned home will still remain. So they say that the purchase of real estate now and its improvement by building or remodeling is a prudent "hedge" against inflation.

Now as to this we make no predictions; because it does not matter whether this country does or does not experience inflation. In either case the fact remains that a well selected and well constructed home is the premier investment value for any family, and that with building activity increasing and shortages of skilled workmen developing in many localities, building costs are bound to rise. The service which a modern home renders year after year has a fixed value in utility and satisfaction; also many have found during the last five years that their real estate investment has stood the test better than stocks or bonds.

The "net" of all this seems to be that now is the time to buy, build or remodel. The spring of 1935 presents an opportunity which may not soon come again.

Thousands of young married couples—especially those with increasing families—are dreaming of new, up to date homes that they can buy on reasonable terms. It will take only a slight pressure of rising rents to push these families into the final decision to build. A number of the largest life insurance companies have just announced adoption of the 20-year amortized loans as their new method of financing, and are planning to put their resources into such loans. This means that anyone with a steady job and a small down payment will be able to build. FHA has liberalized its provisions, and already thousands of loans are being made under its long term, low cost financing plan. All of these are splendid arguments for the contractor to use. Prospects of inflation, rising rents, the modern comforts of a modern home—all of these are powerful selling tools placed in the hands of the skillful salesman. AMERICAN BUILDER has always believed and still contends that the residential contractor is the natural salesman of the building industry. He has the contacts, he has the knowledge, he has the ability to build. Today he has unusual opportunities to use his selling talents by taking advantage of the arguments in favor of home building.

Required in the erection of a dwelling for Mr. John Public
Enterprise and Thrift Skin the city of Home Contentment

GOOD "SPECS" → SPECIFICATIONS OF MATERIALS AND WORKMANSHIP

GENERAL CONDITIONS

PROPOSALS:—Proposals are requested covering the general contract. Walks and driveways are not included in this contract. Proposals shall be addressed to the Owner in a sealed envelope bearing the title of the work and name of the bidder. The contractor must state in his proposal the number of working days from the date of signing the contract in which he will guarantee to complete the work. All drawings and specifications submitted to the bidder for his use in making proposals are the property of the Owner and shall be returned to the Owner with the bid.

RIGHT TO REJECT BIDS:—The Owner reserves the right to reject any and all bids.

EXAMINATION OF PREMISES:—Before submitting his bid the contractor shall examine the building site. No allowance will be made him for lack of full knowledge of all conditions except such underground conditions as are indeterminable before the beginning of work.

CHANGING AND SPECIAL WORK:—Understood that the Owner shall have the right during the progress of construction to make any alterations, additions or omissions that he desires to work to the contract. The same shall be paid for by the contractor. The same shall be paid for by the contractor. The same shall be paid for by the contractor.

GOOD HOMES

WORKMANS COMPENSATION:—The Owner shall effect fire, lightning and bear all losses occasioned until the same shall be completed, obtain and pay for liability insurance covering Workmans Compensation Law which may be in operation at the time of completion of this contract.

INSURANCE:—The Owner shall effect fire, lightning and bear all losses occasioned until the same shall be completed, obtain and pay for liability insurance covering Workmans Compensation Law which may be in operation at the time of completion of this contract.

OMISSIONS:—The drawings and specifications are intended to co-operate. Anything shown on the drawings but not mentioned in either but which is reasonably implied shall be furnished as though specifically shown and mentioned in both without any extra charge. Should anything be omitted from the drawings necessary to the proper construction of the work herein described it shall be the duty of the contractor to so notify the Owner before signing the contract and in the event of the contractor failing to give such notice he shall make good any damage or defect in his work caused thereby to be without extra charge.

Sworn enemy of slipshod work—

SOUND AND COMPLETE SPECIFICATIONS are the enemy of slipshod work because they eliminate fuzzy thinking and uncertainty. They demand careful advance thinking and detailing by the builder—and they eliminate sharp shooting and substitution of inferior products. They protect both owner and builder. Under FHA financing the "specs" must accompany the loan application—and FHA men say that "good specifications make good homes." A model open specification is given on page 75. It is recommended for careful study.

New and Approved DETAILS for

QUALITY HOME
with precast concrete floor slabs
under construction by R. L.
Falkenberg & Co.,
in Kansas City,
February 1.

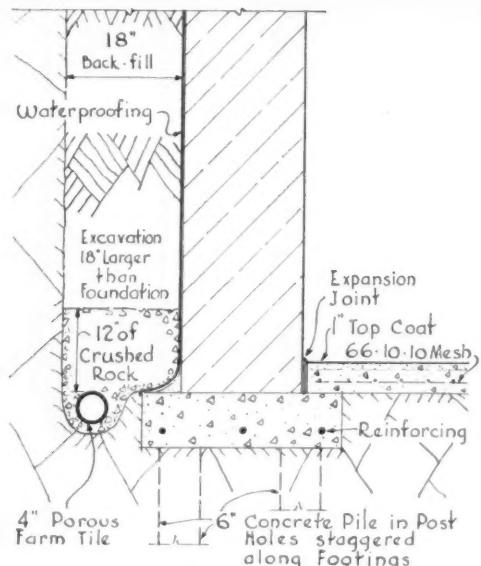
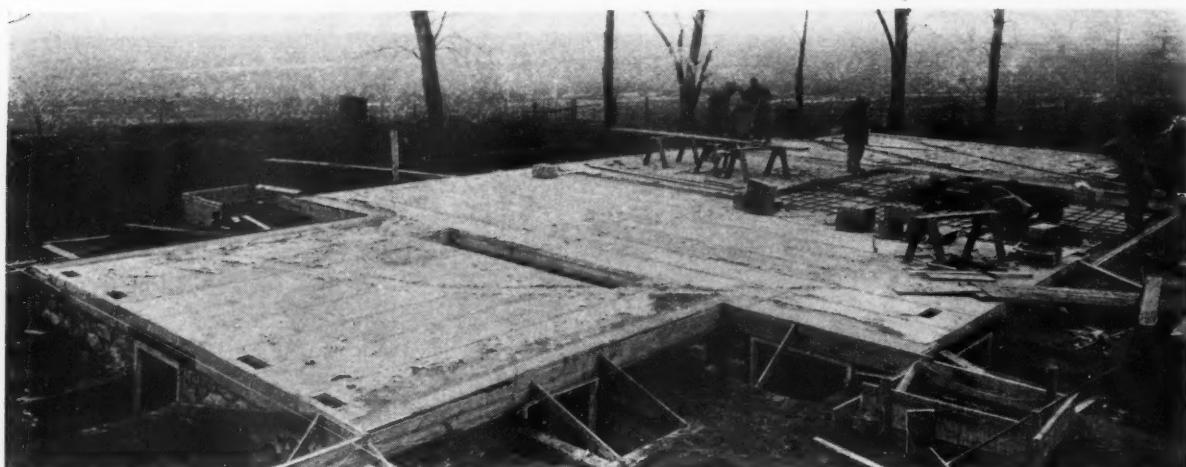


FIG. 1—A quality foundation detail as used by R. L. Falkenberg & Co. Note proper drainage, waterproofing, expansion joints, reinforcing and concrete pile supports to counteract earth shrinkage

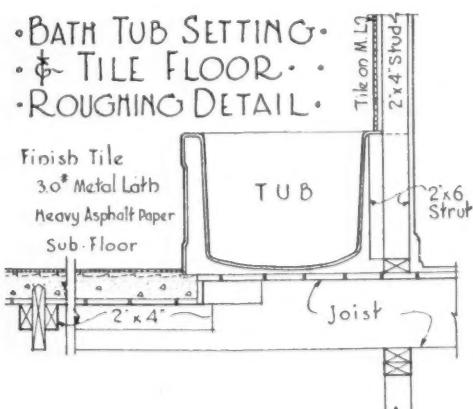


FIG. 2—Cracks around bathtubs are prevented by 2x6 supports nailed to regular studs.

If a house is to deserve the stamp of quality, it must be, in every way, the best product of the builder's art. Its materials must be ideal and the manner of using them must bring out their full advantage. These requirements extend to all prices and kinds of construction. *A well done small house displays its "quality" just as forcibly as any mansion.* The price limitation is effective only when it is so low as to prevent the use of good materials.

Experience clearly shows that there are four principles which, when combined and strictly followed, are bound to produce a well built house. These are:

- First—The material must be chosen to suit its use.
- Second—The mechanical process of assembly and fabrication must be performed logically but not hurriedly.
- Third—The workmanship must be skilled and intelligent.
- Fourth—The structural plan and detail must be sound and based on the characteristics of the materials to be used and the conditions of occupancy of the finished building.

Any type or kind of house has an expectancy of economic life the same as man and other products of nature have an expectancy of actual life. The four principles above as reflected in the plans and specifications must consider this.

Materials Must Resist Deterioration

The outside of a house must withstand heat and cold, rain and drouth, high and low relative humidity, sunshine and wind, rot and decay. In a measure the inside is equally attacked but in addition it must stand abrasion and physical wear. Regardless of other consideration the final choice of a material should be on its ability to do its particular job. Choose outside finish, exposed frame parts, porch rails, etc., to resist rot; metal work to resist rust and expansion; facing brick to resist frost; boxing and sub-flooring to hold a nail; studding to stay straight; joists to be dry, straight, low in deflection; inside jambs, base and base shoe to resist abrasion; floors to be hard and dry.

There is an unfortunate phrase in most building negotiations, "Time is the Essence of this Contract." It is true that under laboratory conditions the construction of a house can be efficiently planned and rushed to completion without penalty to the house, but these conditions seldom, if ever, exist. The orderly progress routine of house building should prevail but no one operation should be undertaken under

QUALITY Home Construction

By JOHN J. FALKENBERG

R. L. Falkenberg & Co., Builders, Kansas City, Mo.

THE DISTILLED EXPERIENCE of many years of sound building by a firm noted for quality homes is presented in this article. Drawings are actual working details based on experience.

Twenty-year loans such as FHA is making call for quality workmanship. The American Builder is proud to present these significant quality methods to aid its readers in building better homes.

conditions unfavorable to it. For example, a two weeks delay in beginning inside finish work because of slow drying of plaster must be incurred rather than to risk the results of dry trim on moist plaster.

The effectiveness of good material depends on workmanship. Good workmanship comes from intelligence and experience coupled with manual skill. The various phases of house building are specialties in themselves, and the best results are produced where each workman sticks to his own particular specialty. That is, shingling, lathing, floor laying, rough framing, and finish carpentry are not one man's work but rather that of five men, each skilled to do his part.

Home Building Now a Science

Residential construction methods as they have existed are, in general, the results of tradition and not of any orderly progress from tabulated research. The material available has been taken by building tradesmen and, with the knowledge gained from their fathers, used to produce reasonably good results. Lack of dependability and uniformity in materials discouraged much study toward improving building methods.

Now, however, the manufacturers have realized their failings and are producing improved products the strength and characteristics of which are published. Their total output is made to adhere to the standards set for it. This has made the science of building construction a reasonably accurate one and has provided a stepping stone for progress.

This progress has reflected itself in many changes of method and practice, a few of the more simple of which are illustrated in the accompanying drawings.

FOUNDATIONS (Figure 1)—Foundation walls regardless of materials are primarily retaining walls for basement excavation and compression members to support weight of house. They are no stronger than the bearing their footing makes upon the soil. This bearing surface should be protected from frost by depth and from moisture by drainage. (See Fig. 1.) Recently a third element has entered, that of earth shrinkage caused by dryness from drought. Post holes (Fig. 1) filled with concrete and tied to footing with reinforcing rods should be sunk to depth below possible penetration of dryness as a precaution where conditions warrant. Moisture-proofing of walls and floors of basements as shown (Fig. 1) with asphalt coating renders it useful for

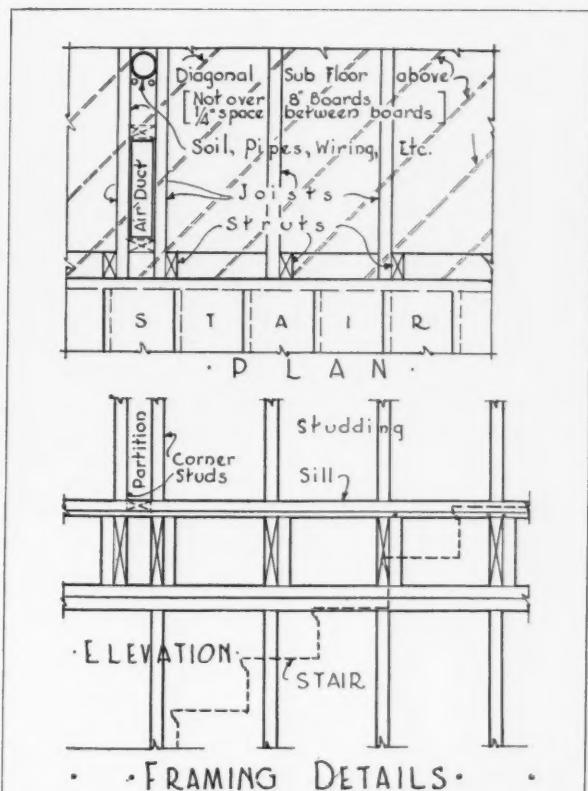
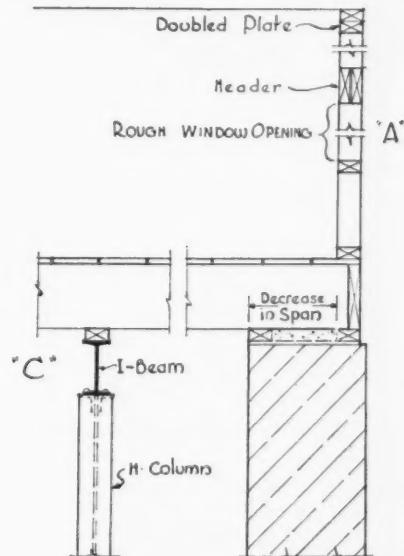


FIG. 3—Studdings are nailed vertically on side of second floor joist to eliminate shrinkage. This detail also shows method of doubling joists under partitions, giving added strength as well as accessibility to ducts, pipes and wires. Subfloor boards are nailed diagonally a quarter-inch apart.



• FRAMING • DETAIL •

FIG. 4—Two mud sills are used in joist framing at foundation line, one at inside and one at outside, thereby decreasing effective joist span about 12 inches. Plate on I-beam at C equalizes shrinkage.

recreation space. Note also expansion joint, reenforcing, proper drainage as detailed.

WOOD FRAMING (Figures 3 and 4)—Framing lumber, although a minor part of the total cost of a house, is the skeleton on which all other parts are placed. A failure in it may produce a damage far in excess of the cost to replace the failing frame work.

The larger and more responsible lumber manufacturers are now producing kiln-dried, grade-marked and trade-marked lumber in all the dimension grades. This material is truly dependable and uniform in its reaction to changes in moisture content. This uniformity means that a builder now may assume that the cross grain shrinkage of joists, plates, headers, stair horses and rafters may be anticipated and compensated so that no appreciable damage will result from the destructive effects of relative humidities varying from 15 per cent to 100 per cent in the different seasons of the year. In general, the solution of the shrinkage problem is that wherever possible, *the amount of cross-grain wood be equalized through all horizontal planes of the house, or where this is not possible, to support the cross-grain wood with end grain wood in which shrinkage is negligible.*

An important feature of joist framing at foundation line is shown in Figure 4 where two mud sills are used, one at inside and one at outside of wall. This gives a decrease in the effective joist span of about twelve inches and at the same time provides nailing for ceiling and wall lath or board. The plate on the I-beam shown in Figure 4 at C equalizes shrinkage with the mud sill and gives a good nailing for plumbing and spacing joists. The rough window header shown at A must be as small in vertical dimension as the load will allow, so that shrinkage vertically will be slight and distortion of members supported by it will be minimized. Wherever the load carried requires a header larger than six inches vertically, a truss should be used, or if this is impractical a metal plate should be bolted between members of header.

The tendency to buckle plaster in stair runs and second floor joist lines may be reduced materially by nailing a studding vertically on the side of the second floor joists and therefore eliminate the shrinkage in those

joists. This is shown in plan and elevation in Figure 3. This detail also shows a desirable manner of doubling joists under partitions, a practice which gives strength as well as accessibility to ducts, pipes and wires. The quarter-inch spacing shown between diagonal sub-floor boards is to afford them better drainage, to prevent cupping and to eliminate the distortion often caused by swelling of the boards in very wet construction periods. When these boards are nailed tightly together, the swelling is accumulative across the diagonal of the building and sometimes causes severe damage.

BATHTUB SETTING (Figure 2)—The crack appearing around bathtubs in either plaster or tile baths can be prevented if the tub is supported as shown in Figure 2. The two by six studding shown are nailed to each regular stud and are carefully cut so that each will support the tub when it is in a level position.

LATHING (Figure 6)—Standard wood framing is naturally adapted to wood lath, which provides an excellent plaster base, except in rooms such as bathrooms and kitchens where moisture conditions make metal lath the preferable base. The value and efficiency of wood lath depends on the plaster key it produces and since this is restricted where lath is applied over headers, metal ducts, ceiling and corner doubles and stair horses, it is advisable to reinforce lath in these locations with metal lath applied over it. Where architecture calls for narrow trim around double hung windows, some kind of plaster base is needed to cover pocket space. Figure 6 shows a simple method which is adaptable to most standard window frames. The metal tie shown prevents the plaster from forcing the pulley stile out of true and produces a tight wind-resistant job.

METAL FLASHING (Figure 5)—The most common conception of flashing is that of a preventative of wall and ceiling leakage, but the most important use is really the protection of exposed woodwork to prevent rot. All window heads, horizontal finish bands, diagonal and horizontal half-timber, the tops of shutters and blinds, window sills directly above finished ceilings and exposed rails and posts should be thoroughly flashed. Figure 5 shows a desirable manner of flashing porch posts on a tin deck and the top of the deck rail.

Additional practical pointers and details for quality construction will be described by Mr. Falkenberg in a later issue of the American Builder

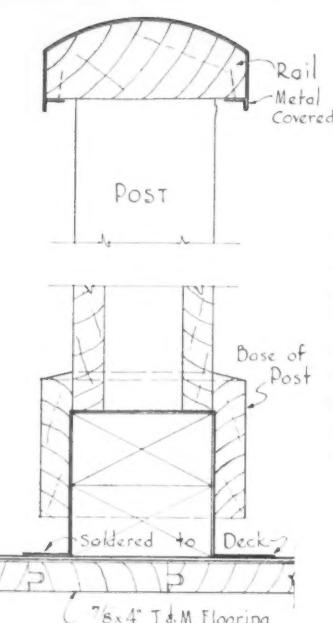
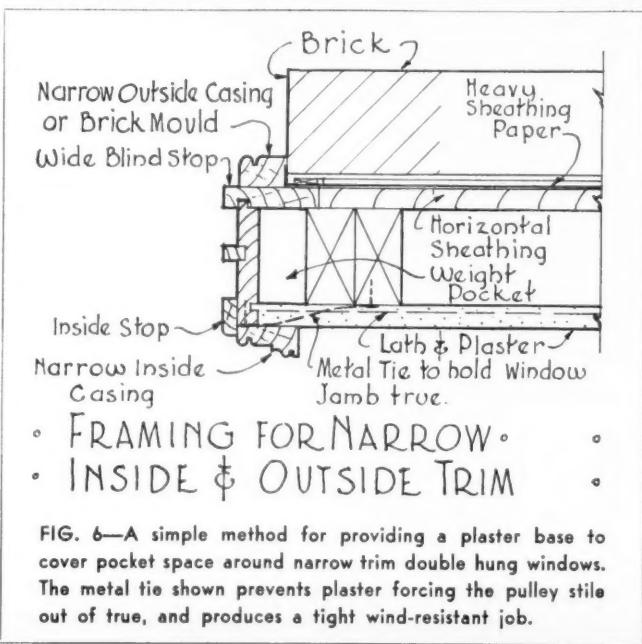


FIG. 5—The most important use of flashing is to protect exposed wooden work from rot. In this detail Mr. Falkenberg shows a desirable method of flashing porch posts on a tin deck. The top of the deck rail is also covered.

• PORCH RAIL FLASHING •



- FRAMING FOR NARROW •
- INSIDE & OUTSIDE TRIM •

FIG. 6—A simple method for providing a plaster base to cover pocket space around narrow trim double hung windows. The metal tie shown prevents plaster forcing the pulley stile out of true, and produces a tight wind-resistant job.

OPERATIVE BUILDERS

A monthly department for the men who plan, erect and equip homes for sale



"Builders Build, Realtors Sell" Successful Set-up at Mt. Lebanon

M T. LEBANON Township—just west of the Pittsburgh limits, across the Boulevard bridge, through the Liberty Tunnel and out Washington Road—has been steadily growing in the esteem of "Golden Triangle" business men as a high grade restricted residential suburb. Laid out on high rolling ground with curving streets, full municipal service and strict zoning, this tract of 5.1 square miles has long been one of the bright spots on the American home building map. Back in '26 and '27 the building permits in Mt. Lebanon Township averaged better than four million dollars per year; population grew from 2200 in 1920 to 15,000 in 1933; while assessed valuations increased from about four million to over twenty million dollars.

Active Market for Good New Homes
Peps Up Pittsburgh Building Program

By BERNARD L. JOHNSON

The home building in this suburb has from the start been of a very high type. Brick and stone have been the favored exterior materials; and English types of architecture predominate. Building sites of ample size have prevented crowding and have encouraged landscape gardening. Such conditions have quite naturally helped to keep property values stabilized during the recent de-



ROW OF "Ab" Young's houses on Mayfair Drive, Mt. Lebanon (Pittsburgh) built and sold this winter at from \$11,000 to \$16,000. Brick and stone veneer, asbestos colorblend shingle roofs and steel supported concrete first floors are favored. Real estate salesmen find a brisk demand for such well built homes.

of his tract that he would encourage reputable builders to do all the building, while he and his men would stick to selling. How well this plan has operated in Mt. Lebanon is quickly visualized as one drives through this beautiful home community.

Tom Stevenson, nephew of Mr. L. T., joined the AMERICAN BUILDER staff for a day to personally conduct a tour around the neighborhood and through all the new houses now under construction. "We expect a greater demand for new home construction this spring," Mr. Stevenson said, "than since 1927. We have no vacancies out here and only five new houses to show in the entire section. Last Sunday we had to keep 'open house' until nearly midnight; the cars crowded the curbs outside these houses like outside a popular picture show. We do no building ourselves; we are the sales agents for these builders; they do an excellent job planning and building and that makes it easy for us to sell their houses promptly. These builders are artists, each in his own way; they build style and character into their product."

Typical of these operative builders in Pittsburgh's leading residential suburb, we found Mr. Albert N. (Ab) Young, creator of the five new houses on Mayfair Drive illustrated. Four were recently finished, one is just now being framed in. All have been sold, three being all-cash deals at \$11,500 each, complete with lot and landscaping.

lot and landscaping.

Mr. Young, by the way, like most of these Pittsburgh better builders, is an old time reader and student of this publication. He handles all "sub-contracts" himself with his own men. During the past 14 years he has built 400 houses in Mt. Lebanon. Last year he put up 14 which the Stevenson, Williams organization sold. This year he expects to build at least 25. His favored practice is embodied in the following specifications:

SPECIFICATIONS FOR HOMES ON MAYFAIR DRIVE
A. N. YOUNG, BUILDER

EXCAVATING: Excavating allowance \$115; if cost exceeds this, to be paid by owner.

FOUNDATION: Concrete footings and 10 courses concrete block.

FIRST FLOOR: To be J & L Jr. beams and 2" concrete slab with 2x2 wood sleepers to receive oak flooring.

LUMBER: 2nd floor joist 2x10" Y.P. 16" o.c. Rafters 2x6" Y.P., 24" o.c. Exterior walls and roof to be sheathed with 1x10 and 1x8.

FLOORS: 1st and 2nd floors to be select oak, sanded and finished, except kitchen and bath 2nd floor, these to be B grade linoleum; 1st floor bathroom to be tiled.

INTERIOR TRIM: Casings, base, $\frac{1}{4}$ round doors, jambs and window trim to be chestnut, except kitchen, bathrooms and clothes closets, these to be Y.P.

HEATING: Concealed radiators for living room, dining rooms, bedrooms and bathrooms. Kitchen and 2nd floor to be cast iron, open type exposed, painted black enamel. Concealed type to be painted ivory. Boiler to be gas as furnished by National Radiator Co.

PLUMBING: Copper water lines throughout, known as stream line, Sando instantaneous water heater, 2 part cast stone laundry tray, kitchen sink to be Preswood, color as selected. Bathroom 1st floor to have toilet, shower stall and lavatory; 2nd floor bathroom to have tub, toilet and lavatory.

ROOF: Sheet metal work to be copper, also gutters and spouts. Roof to be covered with asbestos shingle tile. If mixed, same to be 70 percent gray, balance of stock color as selected. Any other roof selected other than specified shall be an extra if cost is more than \$400.00 in-

cluding copper work.

BRICK AND STONE: Brick not to cost more than \$17.00 per 1,000 delivered to job. Same to be laid in lime and cement mortar. Chimney to be part stone and brick. Mantel to be chestnut wood shelf over fireplace; flue linings; and damper for fireplace and furnace flue. Stone mantel fireplace to be an arch 40" wide, 30" high with stone hearth. Stone mantel labor not to cost more than \$10.00.

PAINTING: All chestnut wood to be treated with Minwax stain, then finished with wax. All Y.P. woodwork to be four coat enamel. Cellular woodwork to receive 1 coat paint. Exterior wood to receive 3 coat work.

WINDOWS: To be Lupton, Fenestra or Vento steel sash glazed and set in wood surrounds, caulked; marble sills.

ELECTRIC: Bathrooms each 1 electric heater, kitchen 1 electric fan, radio aerial placed as directed by owner. Living room, 2 side brackets, 4 base plugs; dining room 2 side brackets, 1 ceiling, 2 base plugs. Hall 1st floor 1 ceiling. Bedroom 1st floor 1 ceiling, 3 base plugs. Kitchen 1 ceiling, 2 base plugs. Porch entrances each 1 light. Bathrooms to have Miami medicine cabinets with brackets on each side. Hall 2nd floor, also storage room, to have 1 ceiling each. Bedrooms on 2nd floor to have 1 ceiling each and 2 base plugs. Garage 1 ceiling and cellar 2 ceilings. All switches and plugs to have Bakelite plates. Door bell to be installed.

CHANDELIERS: Allowance of \$50.00 to be made to owner; this includes hanging.

KITCHEN: Kitchen Maid cabinets same as McConn house. Walls to be covered with Johns-Manville wall tile 7'0" high. Floor to have B grade linoleum, colors as selected by owner.

BELow—a \$16,000 8-room, 3-bath stone veneer house designed by Joseph Hoover and built by Oscar Larson. Winter weather doesn't stop operations here. Note building paper chalked off as guide to masons laying stone. To left—\$15,000 house on Woodhaven Drive, designed by Thos. Garmen and built by Elmer Claypool; 7 rooms, 3 baths, J. & L. steel beam concrete floor.

EXTERIOR DOORS: Front and rear doors to be weatherstripped, front door to have wide brass sill, rear door to be narrow sill.

CONCRETE: Cellar floor to be 3" cinders, 3" concrete. Rear stoop to be 4'0"x3'0". Sidewalk from house to street to be 3'0" wide, street walk to be 4'0" wide. Front porch and door sills to be concrete troweled smooth. Drive to be concrete 9'0" wide from street to house.

SCREENS FOR WINDOWS: 13 to be installed as directed by owner, same to be Chamberlain make.

PLASTER: All rooms except living room, halls and dining room to be smooth troweled; others to be textured finish colored light yellow.

INSULATION: All exterior plastered walls and ceiling to be blanketed with insulation, U.S.G. glass wool.

LOT: After foundation is completed, to be graded ready for top soil. Shrubbery not included.

Install 1 Westwood electric fan in kitchen.

Each bath, 1 electric heater.

Floors to be sanded and finished.

Contractor to furnish all rough hardware.

Owner may select finish hardware to cost \$40.00.

1 medicine cabinet in each bathroom, with brackets attached.

TILE WORK: 1st floor bath to be tiled 4' high; shower stall to be tiled to ceiling.

2nd floor bath to be tiled with Johns-Manville tile 4' high; over tub to be 6' high.

Garage door to operate overhead.





CHARLES
H. REIS

Quality Specifications Make Allwood Homes Sell

By JOSEPH B. MASON

MORE THAN 350 HOMES sold by New Jersey operative builder since 1930. Quality products featured. Praises FHA home financing plan.

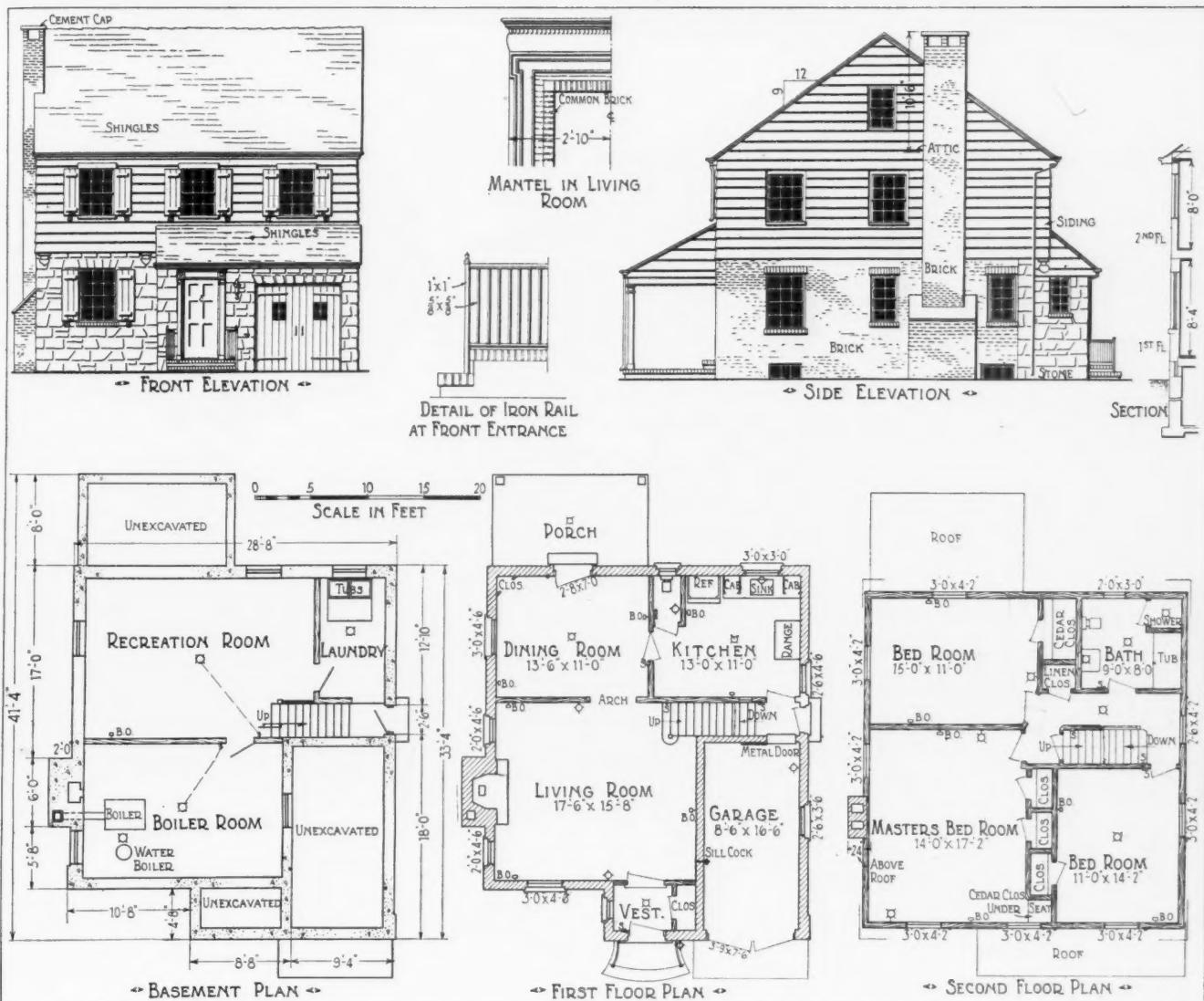
CHARLES H. REIS, president of Allwood Homes, Inc., and one of the most prominent New Jersey operative builders, believes in quality construction. He has stuck to this belief through the depression, and has proved his point by selling more than 350 homes since 1930.

"It has always been our policy to purchase materials produced by nationally known manufacturers," he says. "Our specifications call for quality work throughout, and have received much praise from architects and financial institutions." This is sound practice.

Last year Mr. Reis made a thorough study of all types of architecture, and concluded that the small Colonial type pictured above was most popular. As a result, Allwood homes are following this general style, and range in price from \$7,000 to \$10,000.

It is so easy to talk in general terms of quality without meaning anything that AMERICAN BUILDER asked Mr. Reis to show proof. A long-time reader of the AMERICAN BUILDER, he agreed to publication of complete plans and specifications of the quality Allwood home pictured above. Space limitations have made it necessary to abstract the specifications somewhat, but the important details are retained. As worded they are complete in every detail, and are a striking testimonial to the fact that *good specifications make good homes*.

Reis feels that low cost, long term financing under FHA will greatly stimulate the residential construction industry, and is planning to do a good volume of business in 1935. And it will be quality work.



CAREFULLY DRAWN PLANS as well as complete specifications control quality of Allwood homes. Drawings above are of the "quality house" illustrated opposite, built for George A. Merz, famous airplane builder. P. J. Jossier is the architect. Details are well done.

"SPECS" FOR ALLWOOD "QUALITY HOME"

CONCRETE FOOTINGS—8" thick, to project 4". Mixture 5 parts clean broken stone, 3 parts cowbay sand, 1 part portland cement. Footings 3'0" below finished grade or deeper to hard-pan.

CEMENT AND CONCRETE WORK—Cellar, sidewalks, garage floor, concrete 4" thick, 5-3-1 mix. Float off with 1 part cement and 2 parts sand $\frac{3}{4}$ " thick.

CONCRETE BLOCK WALLS—Concrete blocks 12" thick in cement mortar 1 part cement to 6 parts sand and 1 part "Flamingo" waterproofing lime. Cover outside cellar walls with 1" waterproof cement.

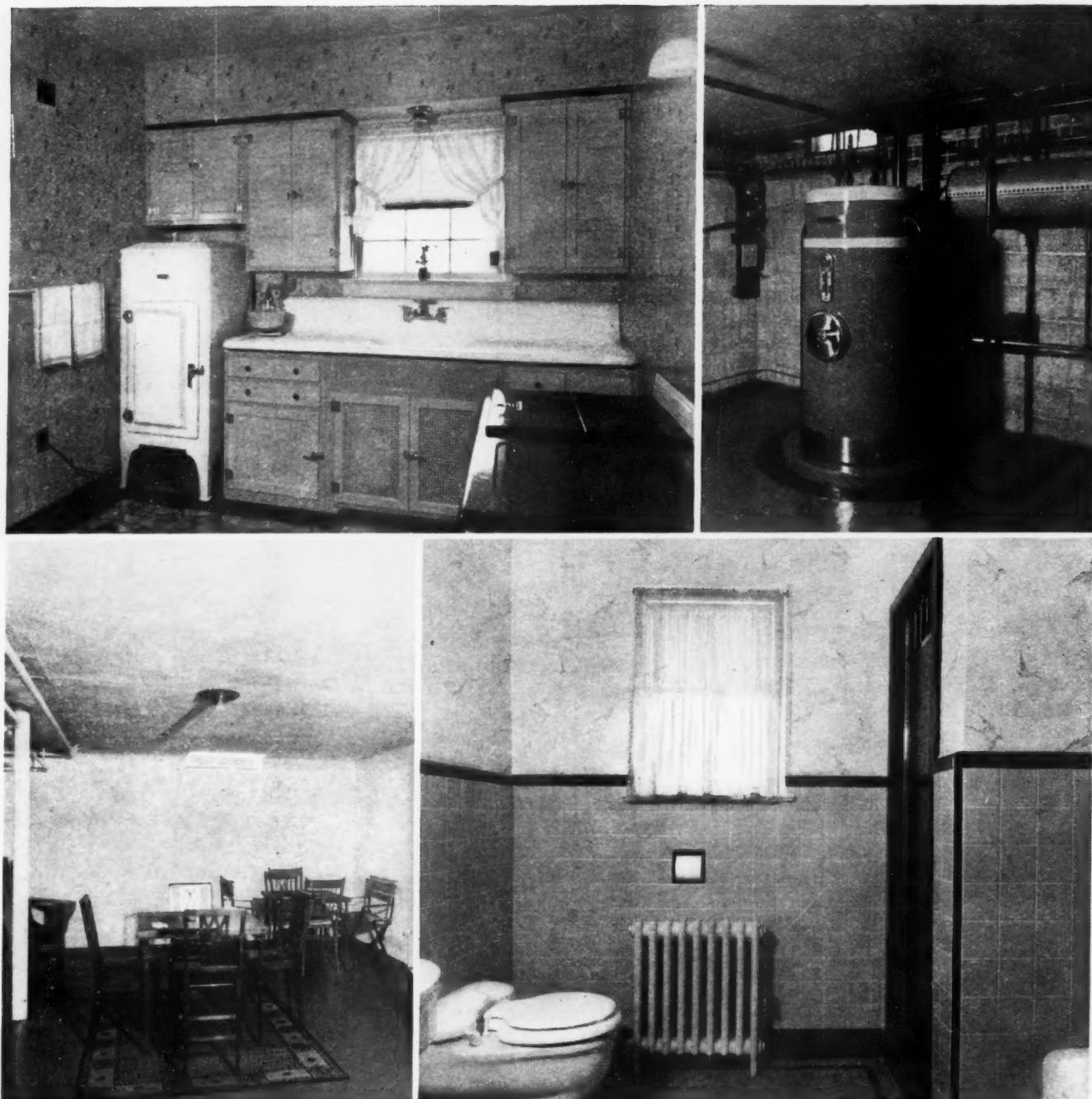
BRICK WORK—Chimney best common red brick; hard burn terra cotta flue lining. Walls veneered with Sayre and Fisher repressed full range red common brick No. 1 laid in cement mortar composed of 1 part cement, 3 parts cowbay sand and proper proportions of Permoset waterproofing as manufactured by Universal Waterproofing Co. Steel L's over openings in brick work. Brick and stone veneer work anchored with corrugated metal ties every sixth course 16" o.c. nailed to solid bearings. Two-ply tar paper behind all brick or stone veneer work.

LATH—Ecod plaster fabric galvanized wire lath. Solidly nailed, lapped and keyed at all joints. Arches and corners protected with Truscon Steel Co.'s galvanized expanded metal corner beads.

PLASTERING—3 coats, Adamant sanded for scratch and brown coats, snow white New England hot brand lime, gauzed with plaster of paris for finishing coat. Finishing lime shall be slackened 48 hours before using. Where tile is



LIVING ROOM OF THE ALLWOOD quality home with Colonial fireplace.



INTERIORS OF THE ALLWOOD HOME, pictured on preceding page, show how quality products give sales appeal. The kitchen has a modern cabinet sink with double tray; basement is spotlessly clean and has electric oil burner. At left below is a corner of basement recreation room with painted concrete floor. Bathroom features quality tile and plumbing with built-in shower shown at right.

indicated, apply one scratch coat, well roughed, pure cement mortar 1-3 mixture using no lime.

CARPENTER AND MILLWORK—All lumber to be fine quality. Keep at least 2" from chimney. Frame to be sound, square Douglas fir well braced and securely jointed; sills to be 4"x6"; floor beams 2"x10" or 2"x12" for large spans, 16" centers for 1st and 2nd floors doubled under all partitions; attic floor to be 2"x8"—all of above to receive 2 rows cross, 1 $\frac{1}{4}$ "x3" spruce bridging for each floor with 2 nails at each end; 2"x6" rafters 20" centers; headers and trimmers to be doubled and spiked; corner posts 4"x6"; studs to be 2"x4", 16" centers; 2 2"x4" for sills and plates; 4"x6" for heads over 3' wide; 2"x8" ridge pieces. Interior partition soles and caps to be 2"x4". Fire stopping where directed.

SHEATHING—Exterior walls, roofs, 1st floor and attic good quality 1"x10" N.C. ship-

lap well nailed, use extra heavy Sisalkraft paper well fitted around all window and door openings.

EXTERIOR FINISH—Best quality white pine. Cover all exterior walls, except where brick or stone or stucco is shown, with Red Cedar Maltese $\frac{7}{8}$ x10 siding, 8" to the weatherer, mitered at all angles and nailed at all studs.

ROOFING—Giant asphalt strip shingles of Flintkote; galvanized nails. Hips to be doubled, valleys to be of same materials.

WINDOW FRAMES AND SASHES—Outside sash "Unique Balance"; weatherstripped. Basement sash Truscon steel. All windows and doors gun caulked where same meet brick or stone with Minwax caulking compound.

DOOR FRAMES AND DOORS—Outside jambs clear white pine 1 $\frac{1}{8}$ ". Interior jambs steel buck and trim of Superior Fireproof

Sash and Door Co. Front, rear and side doors weatherstripped with brass saddles.

Front door to be Colonial six-panel white pine 1 $\frac{3}{4}$ " thick. Side, rear doors 1 $\frac{3}{4}$ " white pine with horizontal moulded panels, wood muntins above with glass. Interior doors 1 $\frac{3}{4}$ " white pine, six panel, Colonial type. Garage doors 1 $\frac{3}{4}$ ", 12 panel oak.

KITCHEN CABINETS—Ready built and completely finished by National Built-in Products Co., erected per their specifications.

FLOORS—Under floors diagonally laid $\frac{7}{8}$ "x10" N.C. shiplap well nailed to every bearing. Felt paper between rough and finished floors. 1st and 2nd floors, T.G. ends and butts red oak flooring $\frac{7}{8}$ "x3" thoroughly seasoned and kiln dried, blind nailed.

INTERIOR FINISH—Good quality white pine 5" base in one piece, $\frac{1}{2}$ " quarter round at floor line, windows to have $\frac{7}{8}$ "x3" moulded

(Continued on page 98)



"We Take the Headaches Out of Home Building"

says C. A. HEMPHILL, Residential Contractor, Evanston, Ill.

C. A. HEMPHILL photographed at local FHA home modernizing exhibition. He is president of the local Chamber of Commerce.

C. A. HEMPHILL, well known Evanston, Ill., residential contractor, offers convincing proof that the best kind of building service is the one in which complete control and responsibility are centered in the contractor.

Hemphill takes the headaches out of home building by handling all the details, including architectural planning. He is one of the few North Shore suburban home builders who has continued to build fine residences for sale throughout the depression. As president of the Evanston Chamber of Commerce he is also an active booster for the local FHA program.

"The service we are equipped to render is a *complete* one that includes planning and designing, construction and financing," he says in an 8-page folder he has prepared for prospective home owners.

"We get from you as exact an idea as you can give us of the kind, size and cost of the house you would like to have. With your aid and advice we lay out first the floor plans as preliminary sketches drawn to scale. When these are satisfactory we make sketches of the principal elevations to show you what the house will look like.

"We get from you as we go along your ideas of how you want the house built and what you want in it. And from the sketches and this information we will give you

an estimate which we will guarantee before you obligate yourself for a single cent for plans or other fees. We can do this because we make it our business to know current construction costs. You are thus relieved of the serious obligation of the payment of fees ranging from 6 to 10 per cent before you know that your house will meet your ideas as to cost.

"And there is where we take the biggest headache out of home building!

"From the sketches, finished plans are drawn by our licensed architects. From these we check our original estimate and give you a bid price. We prepare specifications written in language a layman can understand, and include in them all items right down to the smallest, such as washing your windows and waxing your floors before you move in. The specifications and plans, together with a contract, constitute the complete contract, which provides, of course, for a single fixed price for the completed house. And with a single fixed price for your house, there's one more headache gone!"

"We do everything possible to guard against 'extras'. They are a source of trouble to us, should they occur, and an irritation to you. We go over with you with the utmost care every detail of the plans, including such things as furniture arrangement, location of electrical outlets, swing of the doors, etc., to avoid changes."

IN THIS 8-page folder
Hemphill gives an unusually clear exposition on the part the contractor plays in home building.



EVANSTON OFFICIALS and FHA men gathered in Contractor Hemphill's booth at the FHA Exposition for this photo

Ad Club Builds New Type Home

Youngstown Businessmen Sponsor "Contentment Cottage," a Sample Home on an Acre Tract for \$5000, -Cash Buyer Already Found,-100 Other Houses Planned

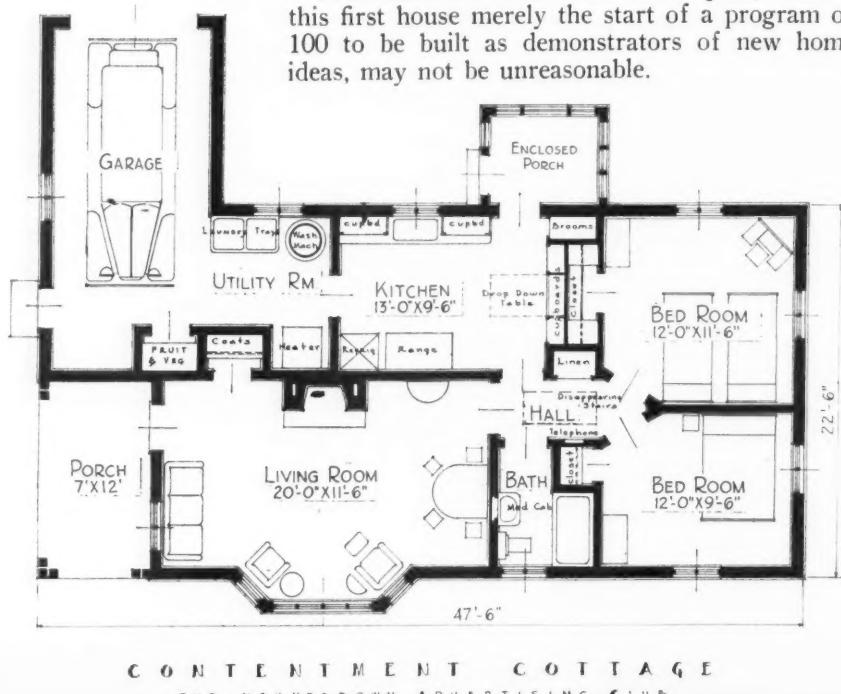
ON March 12 the Mayor of Youngstown, Ohio, turned the first shovel of earth starting construction of "Contentment Cottage," the novel sample home of the Youngstown Advertising Club, and launched a program of better home building under the sponsorship of these young business men which will be a practical demonstration to the million families of The Valley of what can be accomplished today in house construction at moderate expense.

This is an example of civic enterprise which other local business groups are watching with much interest, for it is recognized what a stimulus to com-

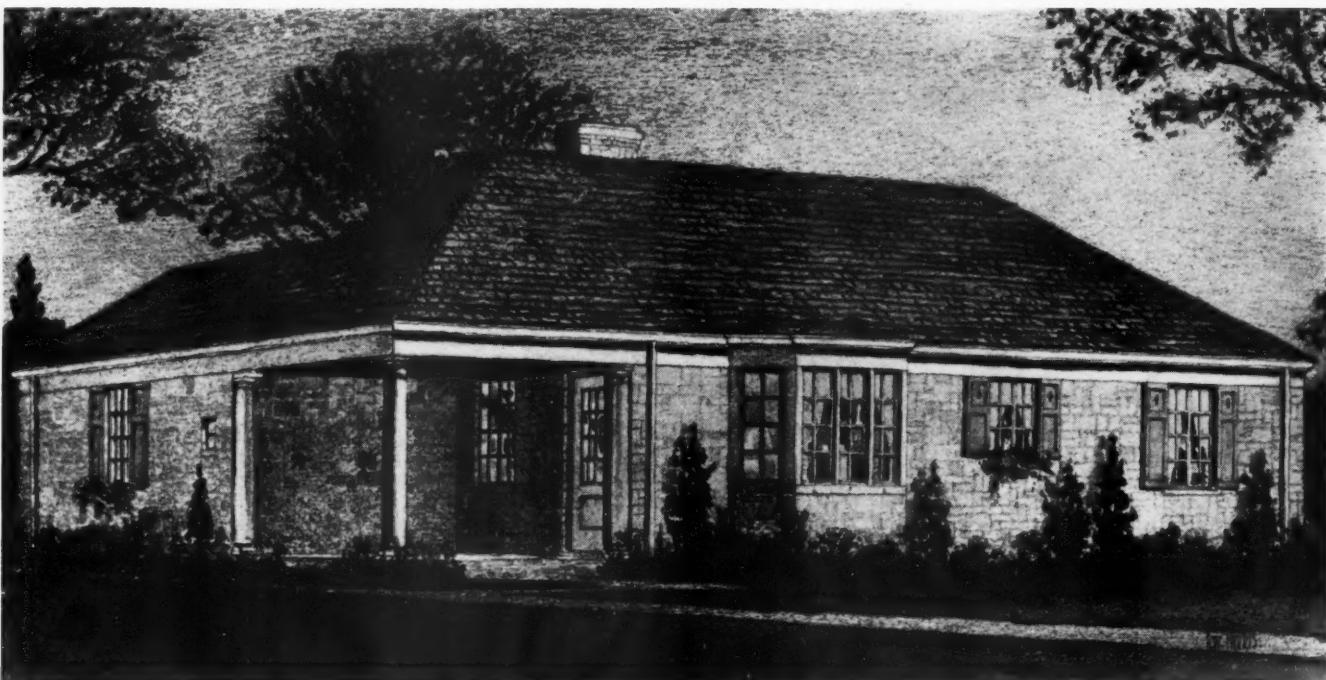
munity prosperity an active home building program would be, and it is believed that such a demonstration as these Youngstown men are putting on would go a long way in getting others to build.

"Contentment Cottage" is a small house on a big lot; living room, kitchen, two bedrooms, bath, utility room and attached garage—all of solid non-burning construction, on a full acre of good earth, and all for \$5,000. The project was first announced and the design illustrated in the "Youngstown Vindicator" of Feb. 17, and ten days later—on Feb. 28—a buyer walked into the architect's office and entered his bid for purchase on completion, \$5,000 cash in bank.

From this it seems that the Club's plan, to make this first house merely the start of a program of 100 to be built as demonstrators of new home ideas, may not be unreasonable.



BIG VALUE and a lasting investment in the Youngstown Ad Club's "Contentment Cottage" at \$5,000 on an acre of ground. This is a basementless house, heater being in "Utility Room" off the garage. Novel construction details shown on page opposite. Cook and Canfield, Architects.



The Youngstown Advertising Club is a live organization numbering among its active members several men representing nationally known manufacturers of construction materials. This perhaps accounts for their creative imagination in planning this new home demonstration. A. M. Wearstler is president, Willis Johnson, vice president, Mrs. Ray M. Thompson, secretary, Thomas J. Seifert, treasurer, Ray M. Thompson, chairman of the Construction Committee, and R. P. Dodds, chairman of the Publicity Committee.

Mr. Dodds said, in explaining the project to AMERICAN BUILDER:

"As you know, many companies have tried to build 'the steel house,' but to date most of them have had for

their reward nothing but bloody noses and black eyes. Some of them have even lost the seat of their pants."

"A firm of local architects here in Youngstown, Cook and Canfield have designed a house which utilizes steel where steel should be used and have not forgotten that lumber has and will continue to have a very definite place in residential building construction."

"They came to the Youngstown Advertising Club and asked us to sponsor the publicity of this house. We agreed to do this, whereupon Truscon was asked to look over the house and specify where steel could be used to advantage and within the bounds of practicability. This we did and the house as designed at present includes steel casements, steel bar joists, floor joists, metal lath, steel studs and a few others of a minor nature. This house will not be a so called modern house, but consistent with its name "Contentment Cottage" will represent the type of a home which we believe will find favor with the great middle class of American public."

"Now here is the fact which to me is all important. These modern, roomy homes, fireproof and termite-proof, each located on its one-acre plot, will sell for \$5,000. Do you begin to get the picture as we see it? The designers of this house intend once and for all to prove to the building public that comfort, appearance and economy all may ride the same horse."

Sam Cook, of the firm of Cook and Canfield, Architects, has put a great amount of research and study into the construction details of this house. He feels that it embodies the best ideas developed in his long experience. "The purpose we have had in mind in planning this house for such staunch construction," Mr. Cook stated, "is to give thrifty home buyers here at least a *two-generation house*. Upkeep and replacements on cheaply built houses discourage home buyers and prove the cheap house the most expensive in the end. We find that in most cases foreclosures do not come from the inability of the owner to make his payments, but because of his disgust and discouragement over constant repairs and renewals."

The important items of construction and equipment in "Contentment Cottage" as outlined by Architect Cook follow:

Condensed Specification of "Contentment Cottage"

FOUNDATION: Foundation walls shall be carried to a depth three feet below finished grade and be built of concrete (not cinder) blocks. Space under joists shall be excavated sufficiently to provide one foot clearance. Garage and utility room floors are laid on the ground.

FLOOR CONSTRUCTION: Truscon steel open truss joists over which apply $2\frac{1}{2}$ " concrete. Finished floors shall be applied direct to the concrete using mastic or cement. Bathroom ceramic tile. Kitchen and hall linoleum. Other spaces wood block.

CEILING CONSTRUCTION: Truscon steel open truss joists spanning the width of the house with insulating material nailed to the bottom and rough flooring nailed to the top.

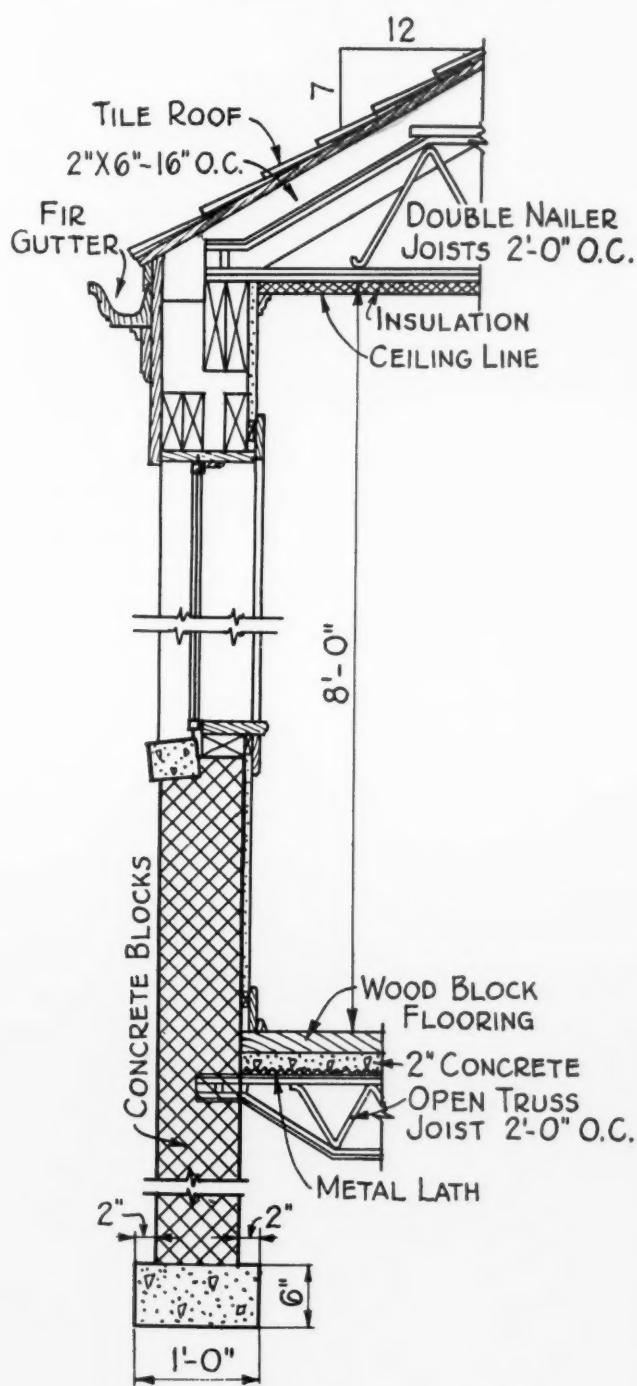
WALLS: Exterior walls shall be of concrete random ashlar, the aggregate being approximately one-half limestone and one-half insulating material. Insulating plaster shall be applied direct to the concrete and the exterior will be painted with portland cement paint. Interior partitions will be Truscon non-bearing steel studs with Truscon insulmesh and plaster.

SASH: All sash shall be Truscon full-opening side hung steel casements.

ROOF: Roof construction shall be wood joist and wood sheathing, over which 30 lb. slater's felt is applied. Finished roof is inter-locking clay tile with copper nails. Gutters shall be air-dried aluminum sized fir with brass fittings.

INSULATION: Entire ceiling will be 2" of cork or equivalent insulating material painted. Exterior walls are insulated as described above.

HEATING: Boiler will be gas fired with pressure water supply and full automatic control. Radiators are recessed cast iron convectors and hot water is circulated by power pump. Thermostat controls gas burners and pump simultaneously. The system as especially designed by the National Radiator Corporation for "Contentment Cottage" will consist of a National boiler and heating units. In addition the fireplace includes a Heatilator unit.



SECTION THRU WALL

THE CONCRETE blocks used are of special insulating mix, half crushed limestone and half vermiculite; outside face random ashlar.

Presenting—

16 PAGES OF HOME DESIGNS

By Photo-Litho Process

Every House Priced Accurately for Your Local Cost Factors

A. W. Holt Briefly Explains Cost Key Method of Estimating

IN THE broad field of residential construction no problem is of greater importance than good design. The AMERICAN BUILDER, for years, has been foremost in advocating *style* in design and this regular feature of the AMERICAN BUILDER is a recognized institution with building men.

Circular No. 2, issued by the Federal Housing Administration, on "Property Standards For the Insurance of Mortgages," treats with the subject of design as follows:

"Designs which are simple and direct will receive preferential consideration. Pleasing effect should be obtained by careful selection and use of materials, by the consideration of mass and scale, particularly with reference to neighboring structures, by the proportioning of openings, and by the use of planting and topographical features as adjuncts to design.

"The elaborate use of motif and ornamentation, the inclusion of an unnecessary variety of materials, and the straining for picturesque effects will be discouraged. Designs which are faddish, or which are incongruous in relation to the neighborhood as a whole, unless expressing a recognized trend, will tend to render property ineligible."

This issue has an exceptional design section greatly expanded as compared with regular monthly issues. This section is printed by the modern Photo-Litho process on special linen stock. It is hoped that it will constitute a guide to quality in architectural design.

Cost Key Estimating

Cost Key Estimating has been proved by seven years of actual use by outstanding men of the building industry in every state, in co-operation with retail lumber dealers who are taking advantage of the free or inexpensive services of Merchandising Council of their own State or Regional Lumbermen's Association. It will meet any test, *anywhere*, because it is a scientific method that is based on LOCAL conditions or desires of EACH individual user. It will meet your particular requirements for following reasons:

1. **COST-RATE.** This is the first factor or figure given by the Cost Key under each house plan. It simply gives the RELATIVE COST of the superstructure of the home illustrated as compared to the "Basic House"

which, in turn, is fundamentally the same as EVERY house in your locality. That is, this Basic House has floor joists, flooring, rafters, roofing, doors, windows and EVERY other component unit of ANY house. When you figure YOUR cost of this Basic House, you involve all of your local factors of construction, materials, prices, wage scale and profits. Whatever you figure for this house will be your "Standard Specifications" for every other house, the cost of which is quickly given by simply multiplying the cost-rate, or first figure of the Cost Key, by your price for the Basic House.

2. **LINEAR FEET FOUNDATION.** The second figure of the Cost Key, under each house plan, gives the linear feet of foundation so all you need do is to multiply it by YOUR price of your typical foundation. Foundations MUST be figured separately because of variation in frost line, building site and individual desire for full, part or no basement.

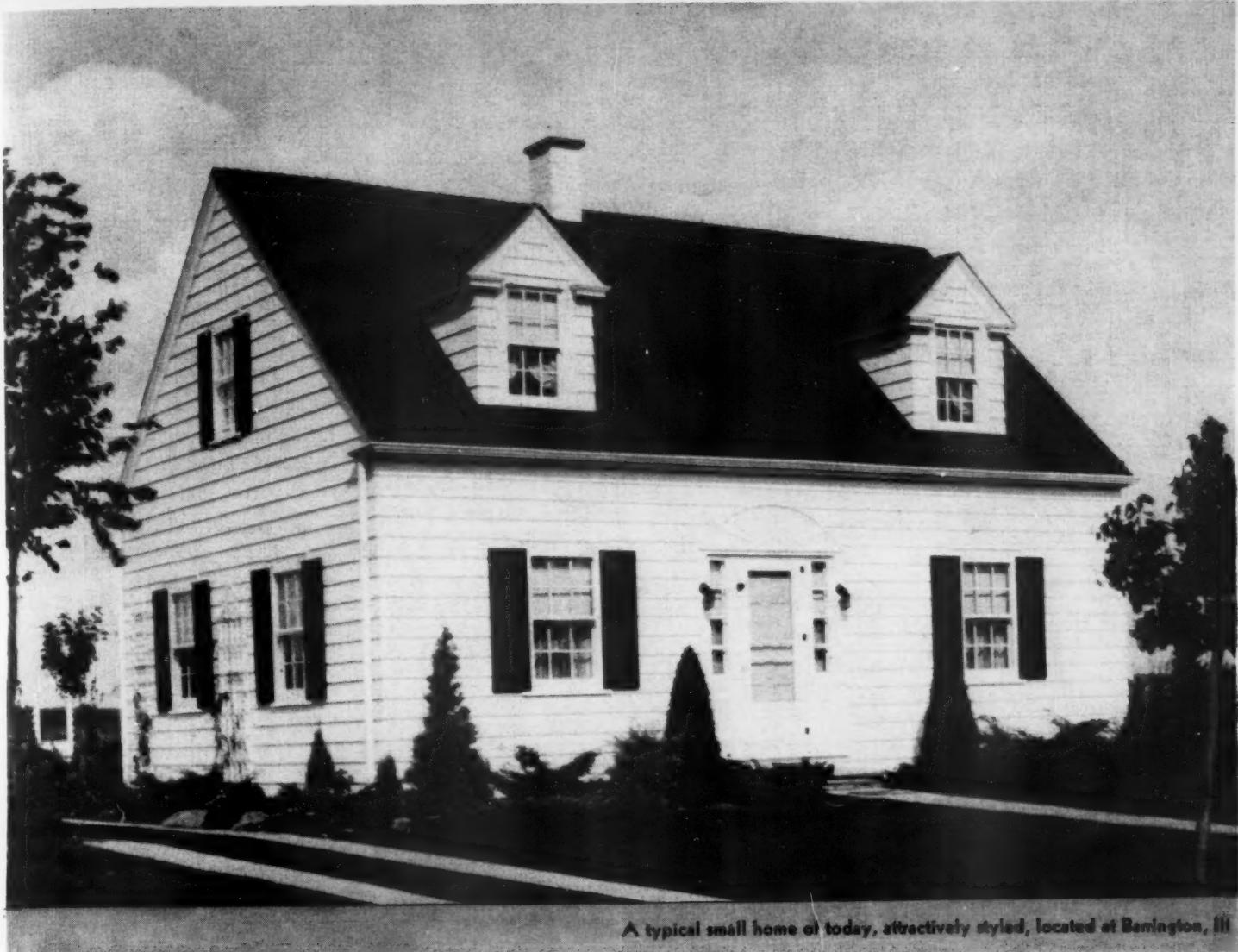
3. **SQUARE FEET BASEMENT FLOOR.** The third figure of the Cost Key gives this basic information for each plan provided basement is wanted under the main house exclusive of open porches or attached garages. If the plan shows no basement this is given in parenthesis so a full basement can be figured if wanted.

4. **CUBIC YARDS EXCAVATION.** The fourth figure of the Cost Key gives the cubic yards of excavation ONE FOOT LARGER ALL AROUND AND ONE FOOT DEEP. Thus it is only necessary to multiply by the depth, required by the building site and design shown, and then by local costs per yard. If only trenches are required for foundations, figure per linear foot of foundation.

5. **SQUARES OF WALLS.** The fifth or next to last figure of the Cost Key gives the squares of wall in case you wish to figure OTHER wall covering than whatever you included for the Basic House. It is important to remember that the cost-rate multiplied by your price of the Basic House ALWAYS gives the same specifications for any other house regardless of what the plan may show. You govern specifications. If you have figured 6" bevel siding for the Basic House and Brick Veneer is wanted for another house, multiplying the squares of wall given by your DIFFERENCE PER SQUARE gives the amount to add for Brick Veneer.

6. **SQUARES OF ROOF.** The last figure of the Cost Key always gives this basic information so you can figure special roof covering as explained for walls. And you will be quoting in terms of the complete unit—as your customers wish cost information.

Cost Key Estimating will prove to be the most reliable method you can use in the long run, provided, of course, the figures are properly used. Hundreds of men everywhere have proved the basic principles to be fundamentally sound and applicable to any locality. For detailed instruction, refer to your May 1934 issue of AMERICAN BUILDER, our new book, "New Era Home Designs," or ASK YOUR LUMBER DEALER. He can write his Association if he does not have the information,

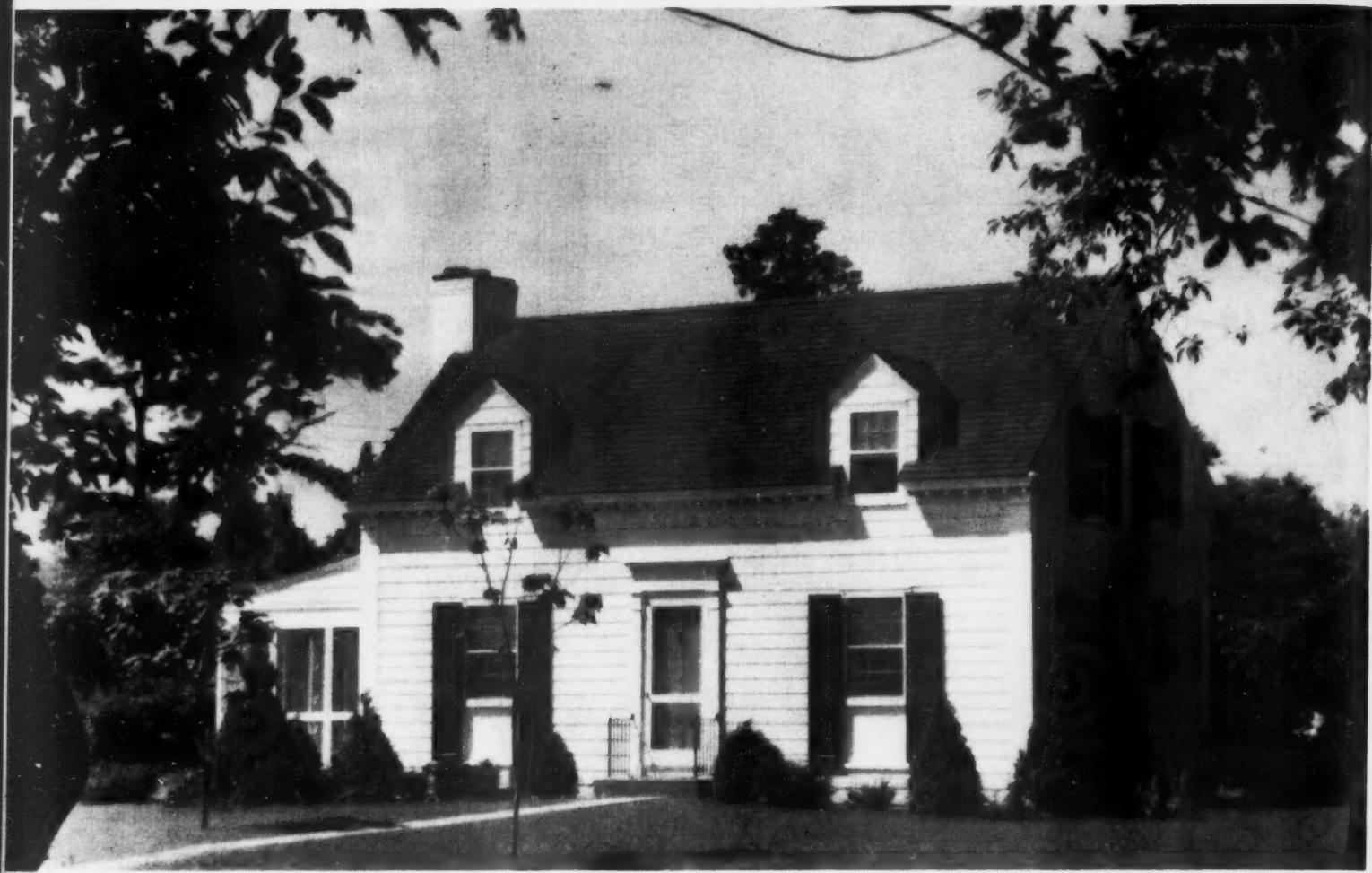


A typical small home of today, attractively styled, located at Bennington, Ill.

Selected Designs for Quality Homes

A special portfolio of low and moderate cost homes of unusual architectural charm

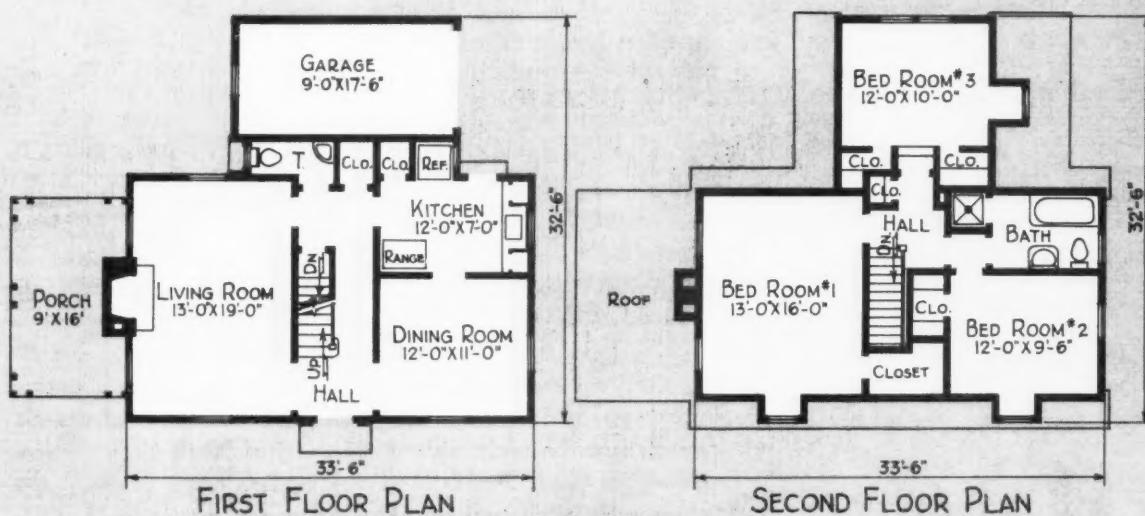
THE BASIC IDEA behind the selection of the various types and kinds of houses shown on the following pages was sound quality—twenty-year quality. Long-term financing of homes calls for better work all the way. Of first importance is an architectural design that is pleasing, simple and salable. The houses in this section are the work of experts who have caught the modern trend. A variety of floor plans and room arrangement is given, showing how the modern home designer and builder are solving this problem. These are quality homes, both in design and arrangement, while remaining low in cost. They merit complete specifications of sound quality materials throughout the job.



Best of Colonial Types

Cost Key is 1.798-132-718-31-21-16.

FINE PROPORTIONING and splendid treatment of details make this Long Island home, designed by Architect Randolph Evans of New York, a success. The cornice and window details are especially good. Floor plan is the typical spacious Colonial arrangement, with central hall, ample closets, a screened porch.

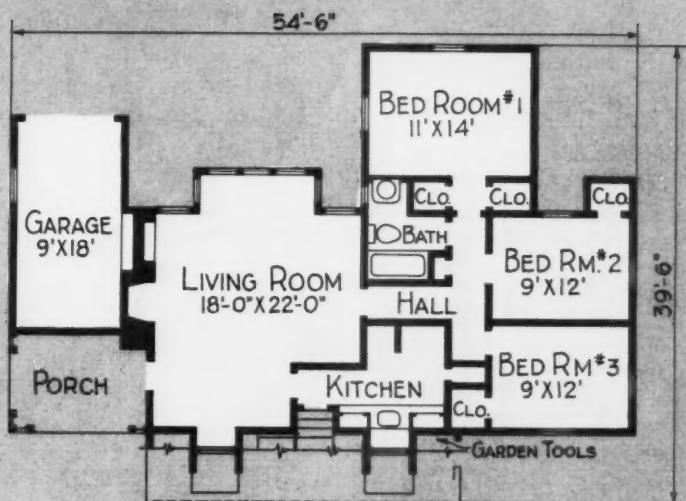


With a Sweeping Roof and an Unusual Plan

HERE IS ANOTHER MODERATE priced home, designed by Randolph Evans, New York architect, and built by the Harmon National Real Estate Corp. on Long Island. Exterior is of white shingles, and the shingled roof is stained green.

THE LONG SWEET of the roof line makes the house hug the ground, giving it an unusually attractive appearance. The chimney is well placed, well proportioned, and the open porch is an attractive feature. This is a house that will appeal to many.

Cost Key is 1.660-206-1146-50-23-24.



THE FLOOR PLAN of this Long Island home is unusual and yet packed with attractive features. The living room is fairly large and well lighted by the bank of windows across one end. The dormer window cut through the roof at the opposite end lets in further light. The kitchen is small, faces the street, has stairs to basement for tradesmen's entrance. There are three bedrooms, with bath conveniently located.

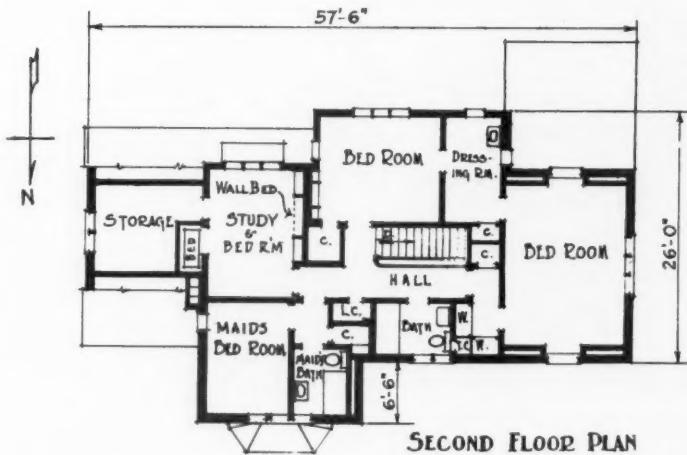
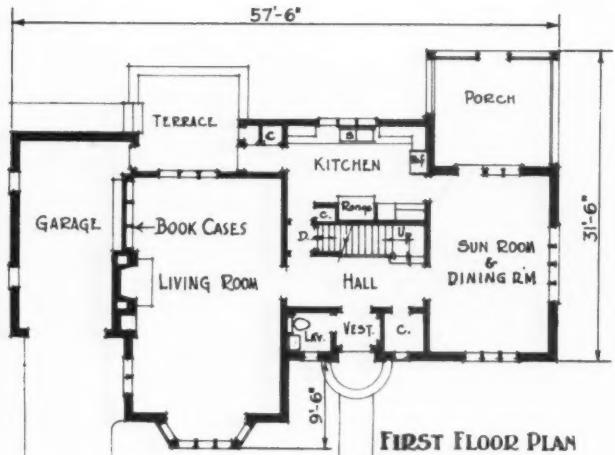




Good English Style White Brick Veneer

Cost Key is 2.747-186-1247-53-30-25.

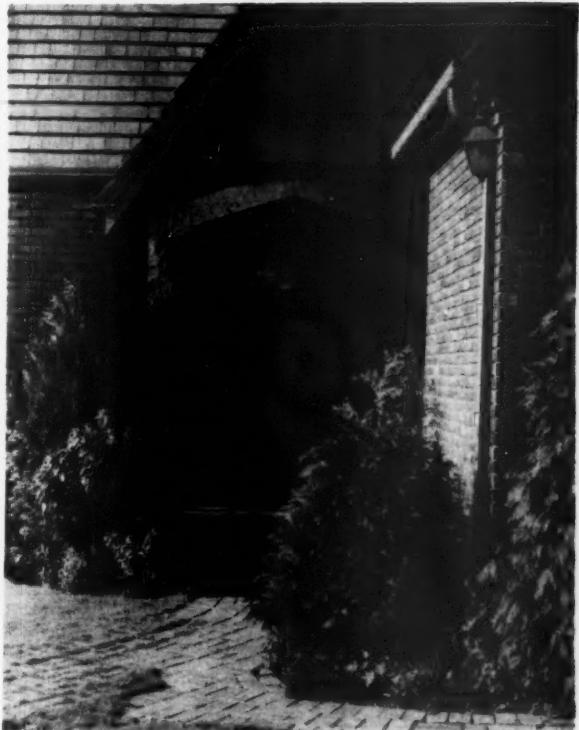
THIS ATTRACTIVE English residence in Minneapolis was designed by Rollin C. Chapin, local architect, and built by Lindquist & Carlson. It is of frame construction, with brick veneer stained white. The architecture is straightforward and in very good taste. The large living room has a pine paneled wall on the fireplace side, with built-in bookcases. The second floor study is also pine paneled and has a disappearing bed. Dining room is large and overlooks a garden. French doors open on the outside porch, which has a removable awning so that south sun can come into dining room in the winter.



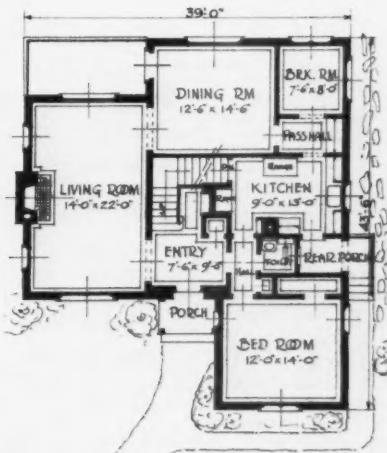
SUGGESTIONS FOR ARCHITECTS AND BUILDERS



THIS SEATTLE RESIDENCE was completed last year at a cost of only \$6,000. It was designed by the firm of Smith & Carroll, local architects, and built by Christensen & Anunson. Unusual charm and dignity have been achieved at low cost.



Cost Key is 2.234-165-1306-54-24-25.



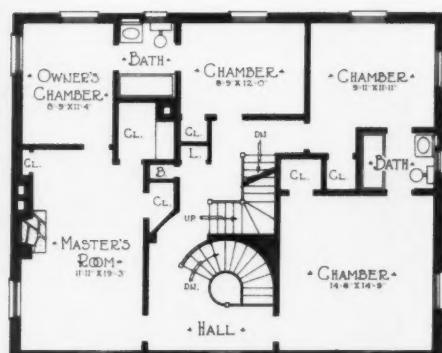
Achieves Dignity and Charm

• AMERICAN & BUILDER RECOMMENDED DESIGNS •



FRIENDLY HOSPITALITY AND CHEER are radiated by this attractive entrance way. The pattern of the bricks, the fan-shaped window above the door and the simple railing, flagstone steps, interesting light fixtures, contribute to its charm.

FLOOR PLANS of the Boston Colonial are straightforward and practical. The circular central hall stairway is good. Cost Key is 2.428-154-1401-58-32-19.

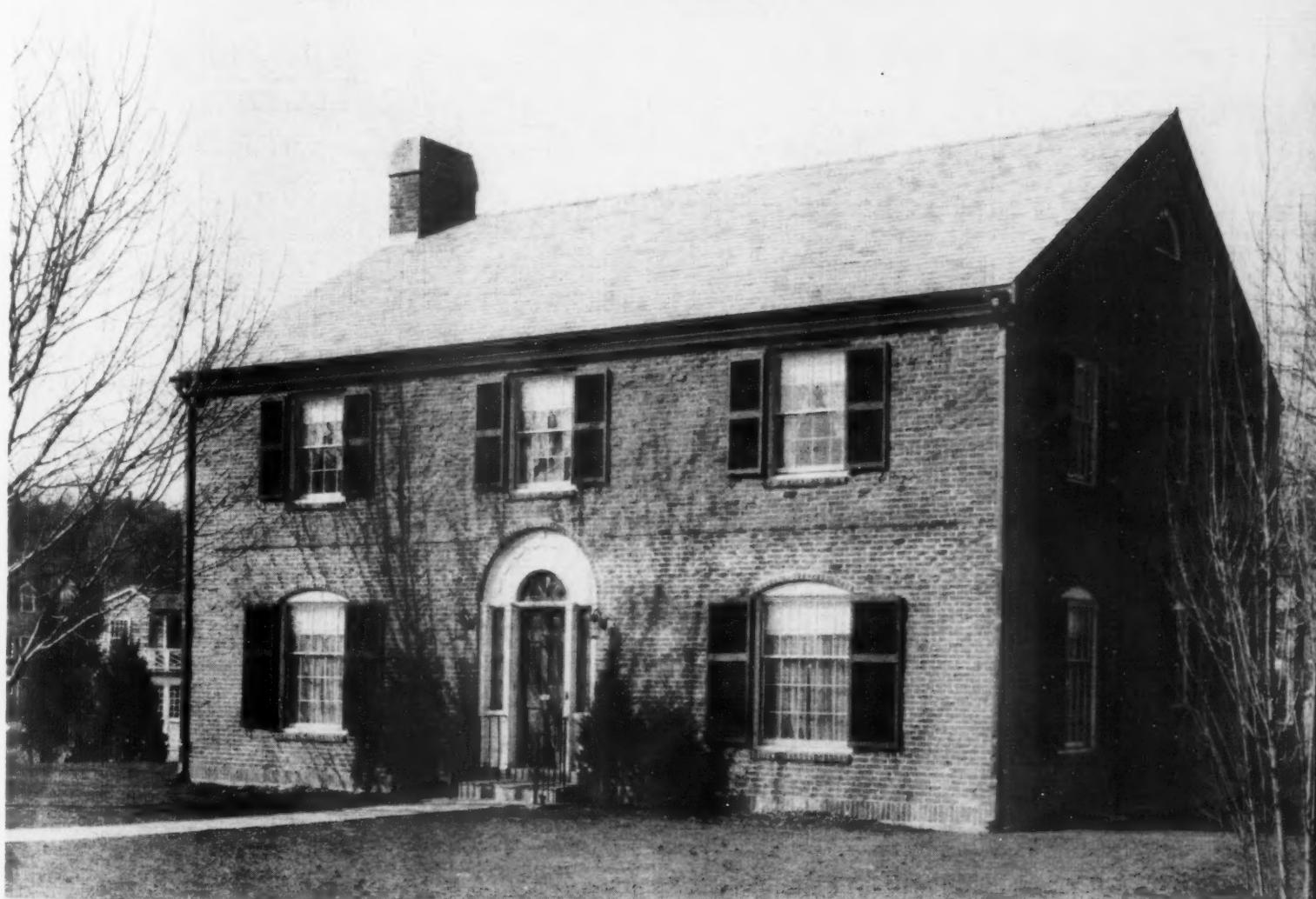
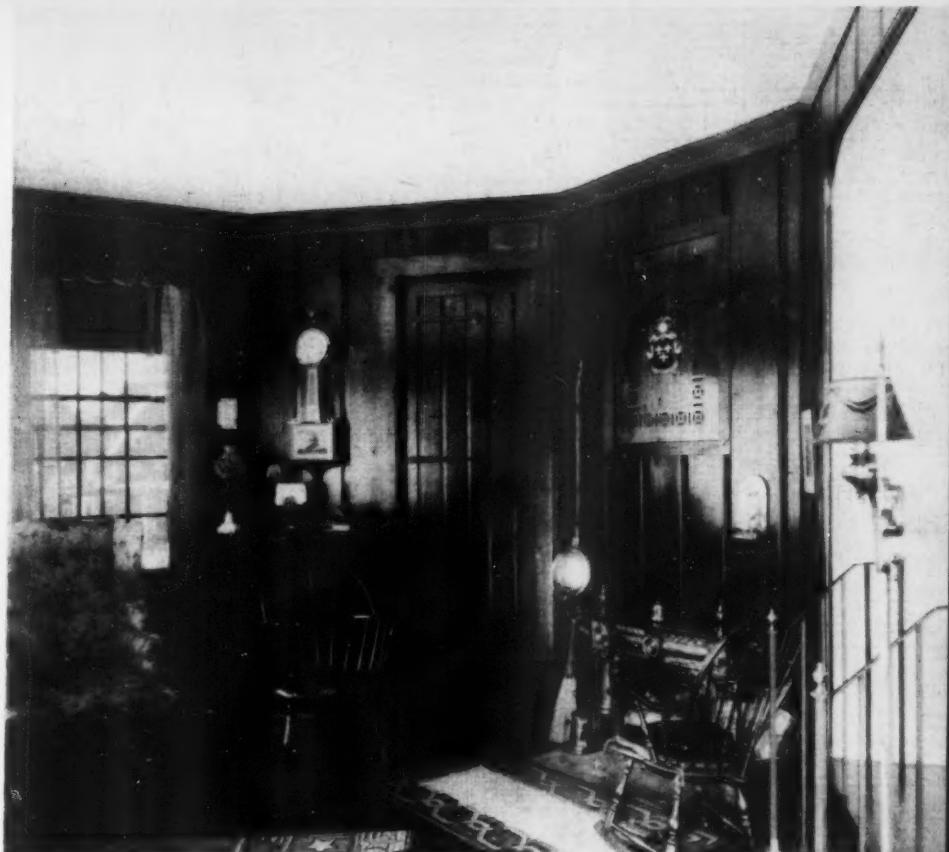


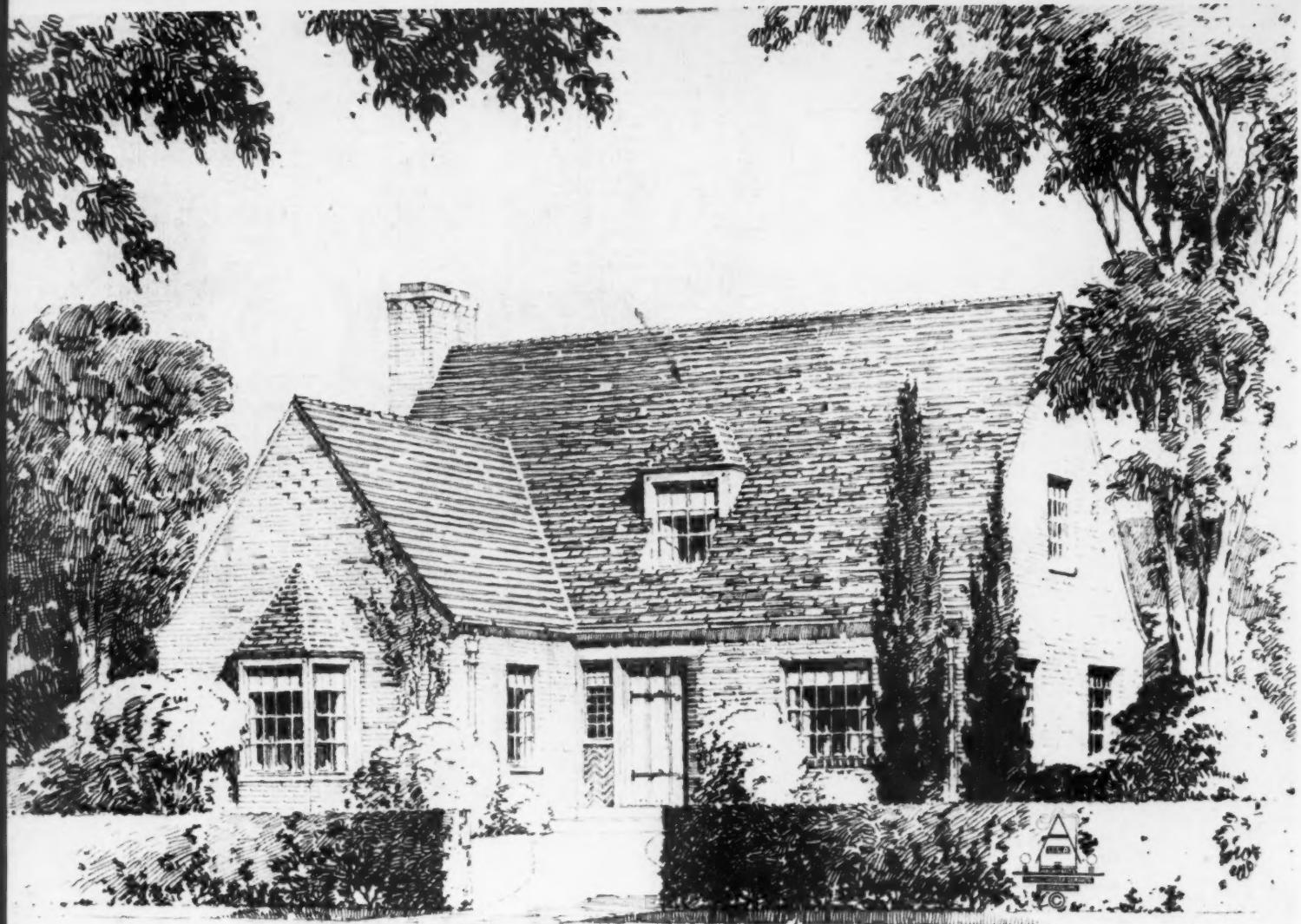
FIRST FLOOR PLAN.

Brick Colonial Boston Style

THIS SUBSTANTIAL, conservative brick Colonial is the kind of house that stays popular through the years. Architect L. L. Wadsworth of Boston has stuck to good proportions and simple details, well executed. The treatment of the front windows and entrance is excellent.

AT RIGHT IS SHOWN INTERIOR of the paneled "Colonial Room" study at rear of living room, which has its own fireplace. This room is one of the most popular in the house.

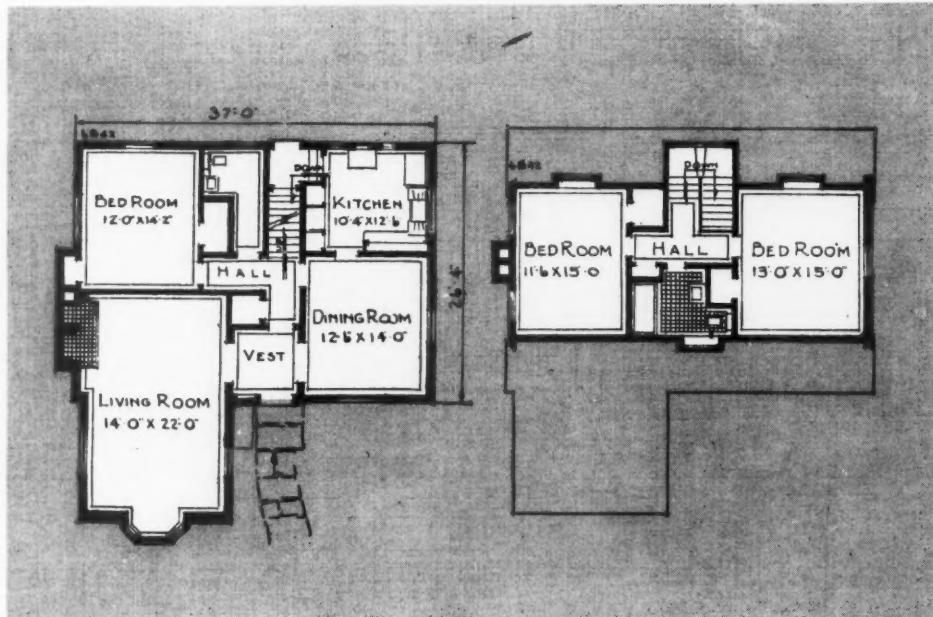




Small Brick— English Details

THIS SMALL brick house has three good bedrooms, and is economical to build. Features of the exterior include the attractive bay window, ornamental brick entrance with door of V-jointed boards, good gable proportions.

Floor plan provides ample sized rooms, good lighting and cross ventilation. Downstairs bathroom, ample closet space. It is design No. 6-B-42 of the Architect's Small House Service Bureau.

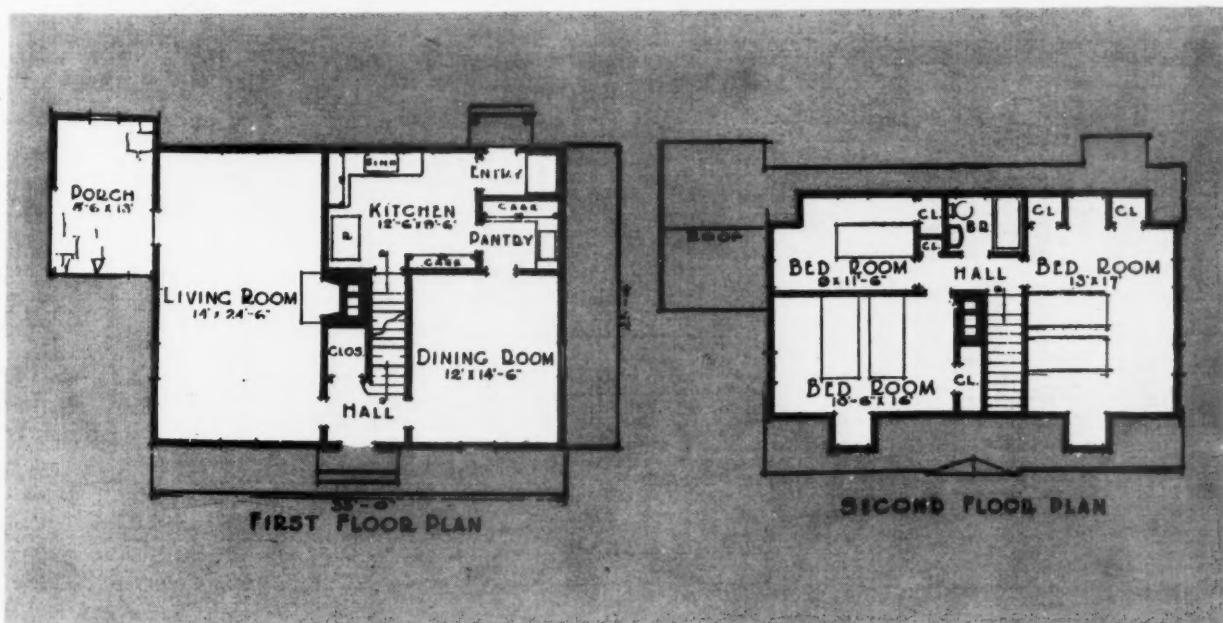


Cost Key is 1.797—152—1178—49—20-23.

SUGGESTIONS FOR ARCHITECTS AND BUILDERS



STORY AND A HALF CAPE COD COTTAGE gives ample living space at low cost. Design No. 6-G-9, Architects' Small House Service Bureau.

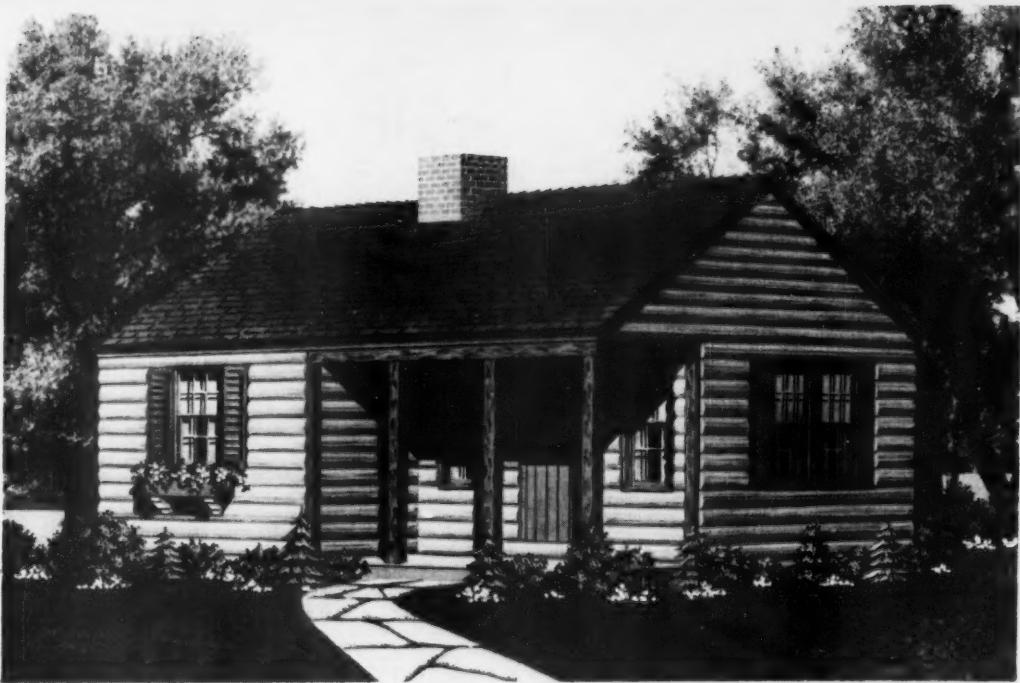
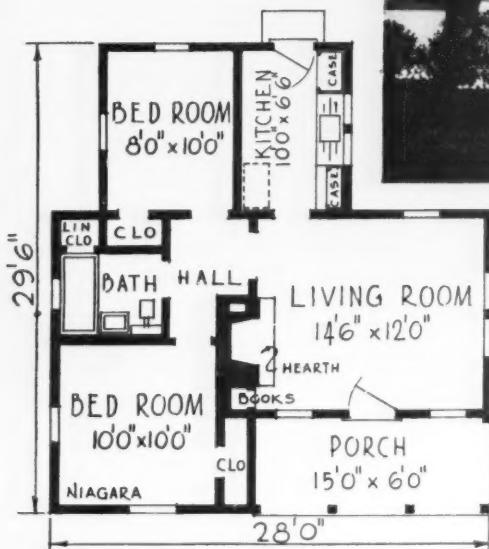


FLOOR PLAN PROVIDES a surprising amount of space for so small a house. There are three bedrooms.

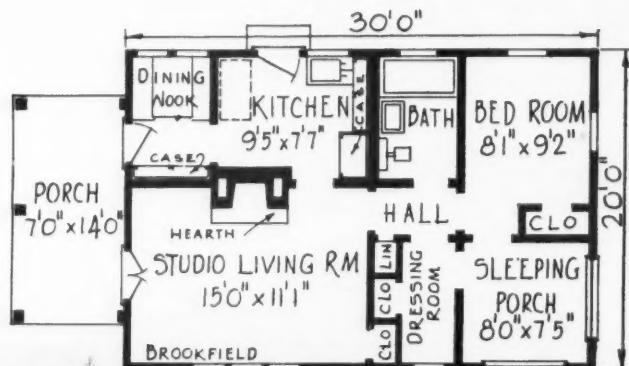
Cost Key is 1.707—121—922—39—17—17.

Four Rooms— Bath, Porch

Cost Key is .865—115—
(610)—(27)—11—10.



LOG CABIN SIDING AND HAND HEWN TIMBERS give this little cottage a charming rustic air. It is well laid out with a big fireplace in the living room, a compact kitchen and an open porch.



Cost Key is .847—100—(600)—(26)—10—10.

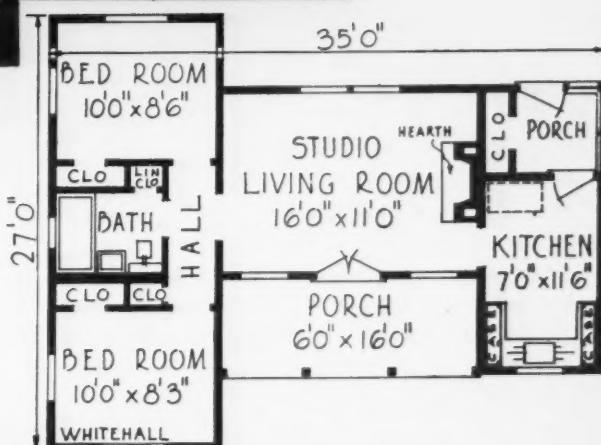
Two Porches

TWO PORCHES, a studio living room, dining nook, dressing room and a compact kitchen are included in this well planned little cottage. Vertical V-siding, tongue and grooved, is used to give an unusual and rustic effect. The enclosed sleeping porch at rear is popular.

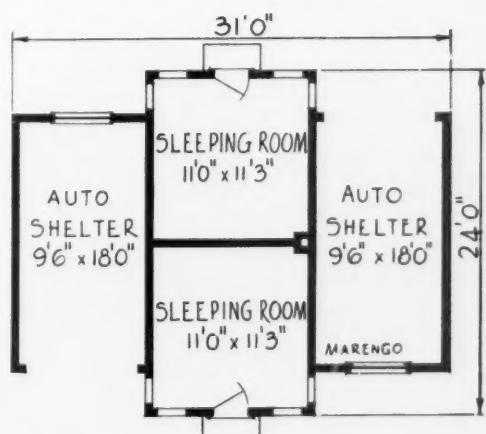


Cost Key is .954
— 136 — 598 —
27—13—13.

THE CENTRAL STUDIO LIVING ROOM with large fireplace is the feature of this rustic cottage, which has both front and rear porches. Two bedrooms, bath and kitchen are provided, and the structure is arranged in a compact, livable way. The vertical board exterior is rustic and pleasing.



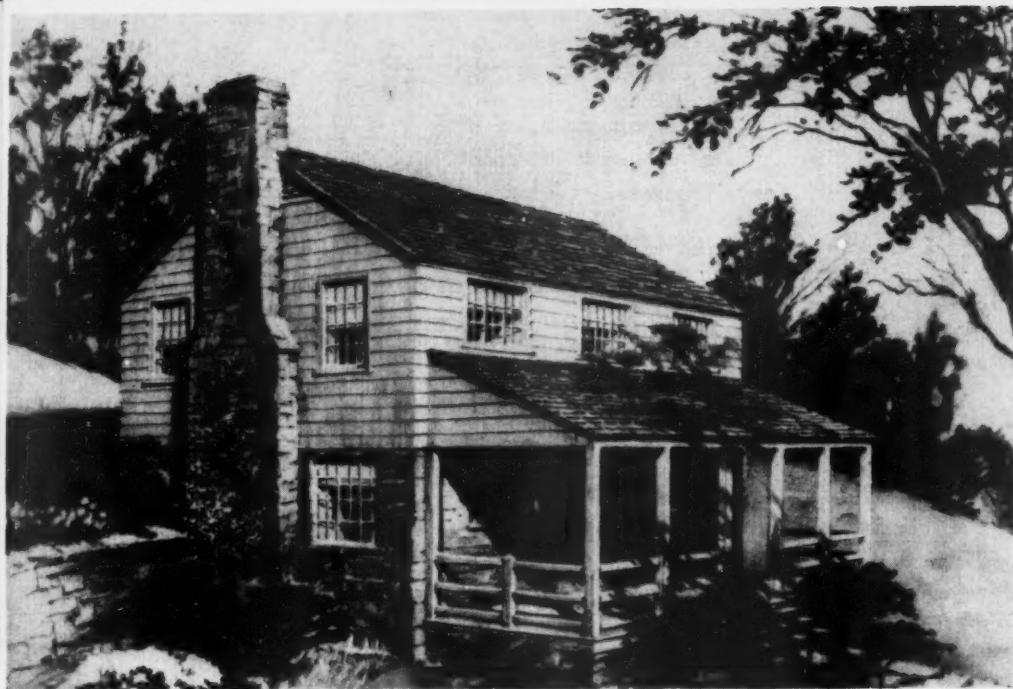
Summer Cottages and Camps



Two Cars - - Two Rooms



THIS DUPLEX COTTAGE shelters both auto and tourist. Accommodations for two customers can be provided in this duplex much cheaper than by building two single cabins. It is attractively styled with vertical and horizontal siding. Cost Key is .673—110—0—0—12—9.

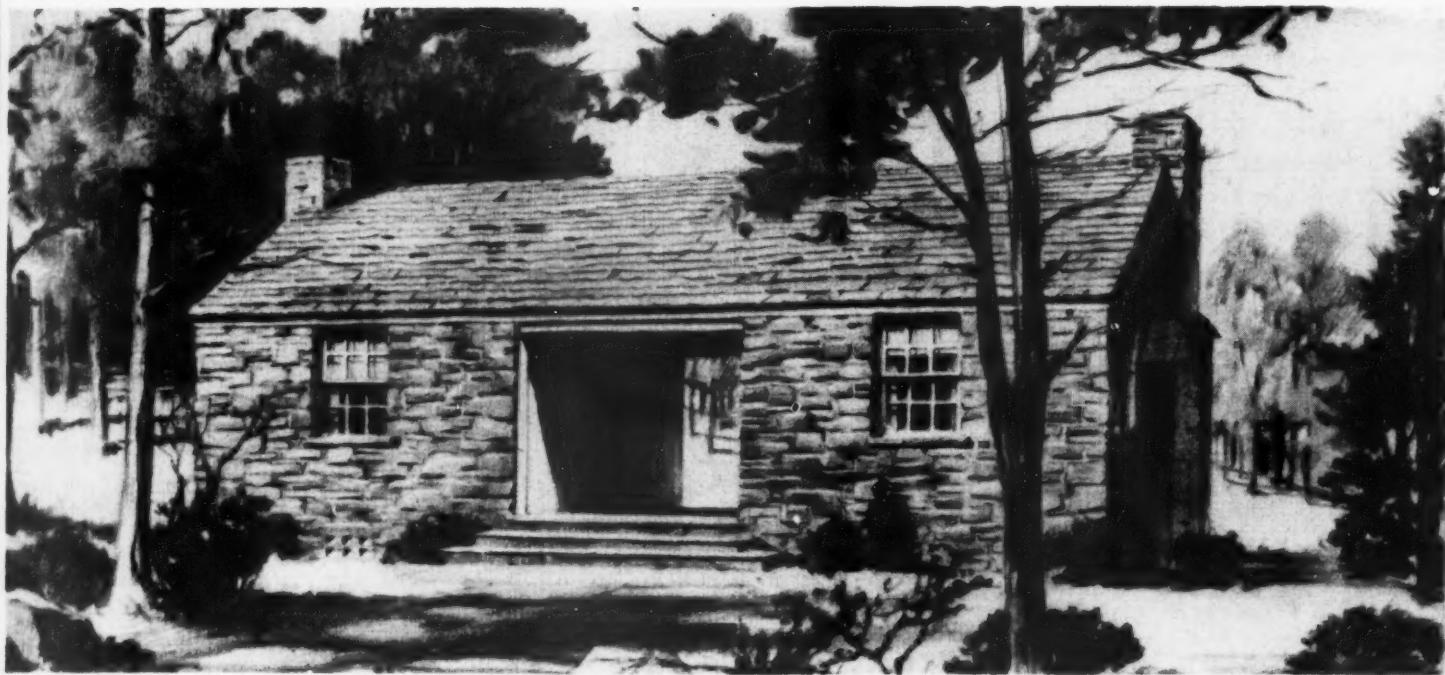
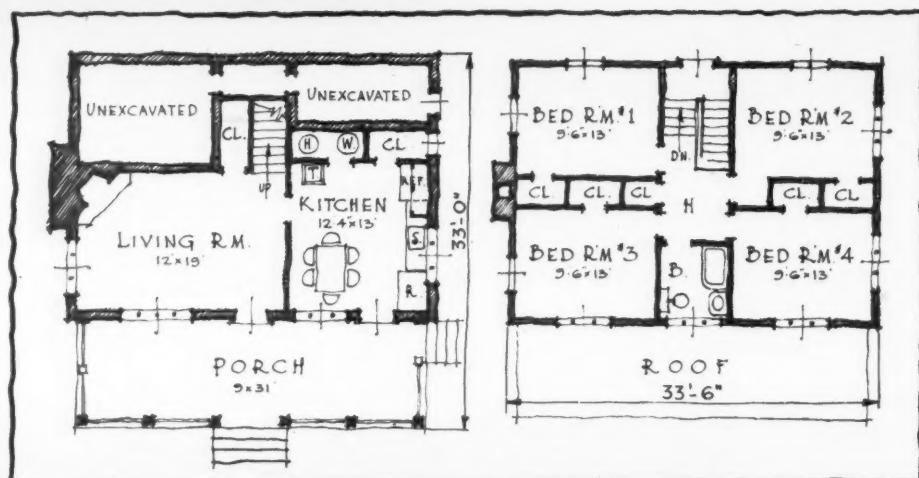


Hillside Home

U. S. ARCHITECTS designed this house for the TVA at Norris, Tenn. It is designed to fit the hillside, uses native stone, clapboard and a style of architecture suitable to the locality. The heavy porch rails are popular in this area. The floor plan has many unusual features worthy of study.

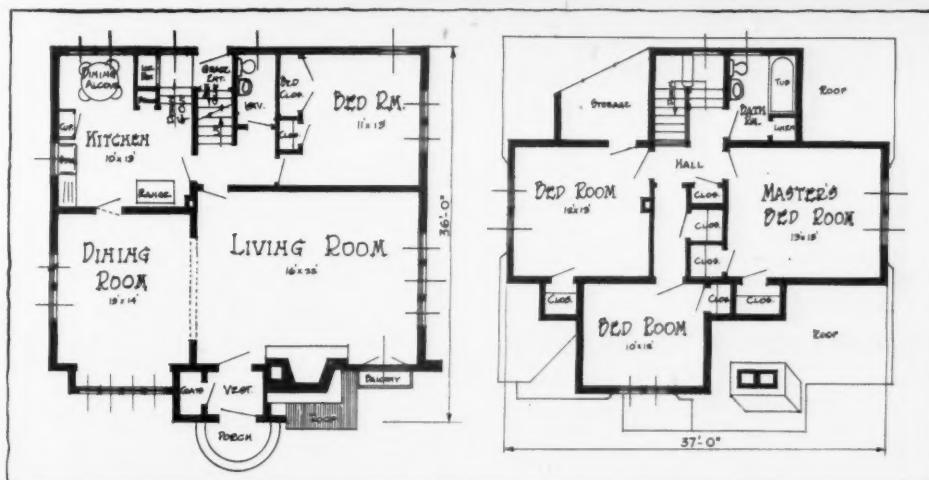
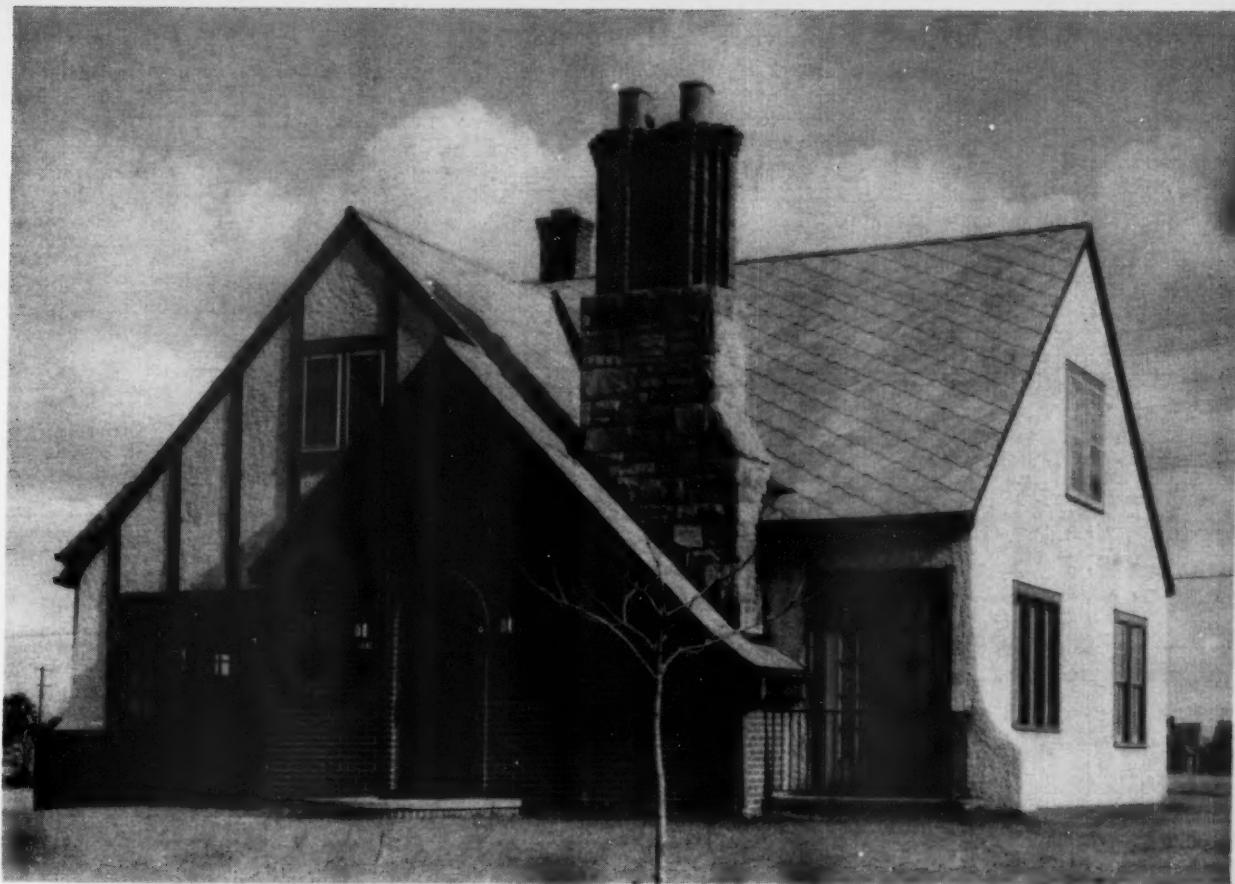
"Dog Trot" House

SHOWN BELOW is another house designed for the TVA at Norris, Tenn., based on the old dog trot or breezeway home commonly found throughout the rural South. The house has all modern conveniences, and with this arrangement gets the benefit of every breeze that blows.



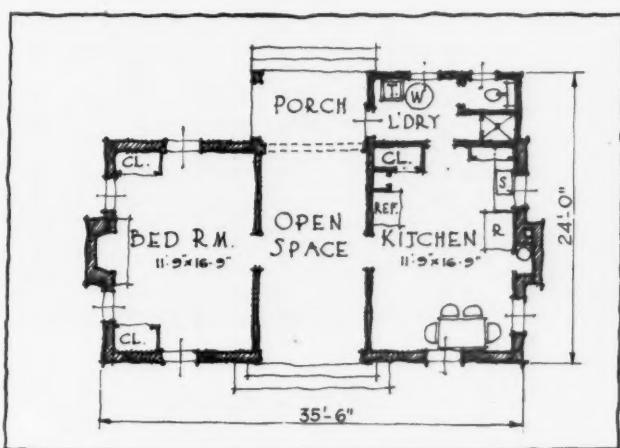
THIS WELL PROPORTIONED stone house uses the "dog trot" or breezeway opening popular in the South. It is TVA design No. 22. Cost Key is .839—119—0—0—12—10.

SUGGESTIONS FOR ARCHITECTS AND BUILDERS



THIS ENGLISH type house is located in Erie, Pa., and was designed by the firm of Shutts & Morrison, registered architects. The sweep of the front gable combined with the impressive chimney creates an imposing effect. Stucco, brick and stone are combined interestingly. Floor plan provides a downstairs bedroom and three bedrooms upstairs.

Cost Key is 2.072—146—
1253—51—21—20.

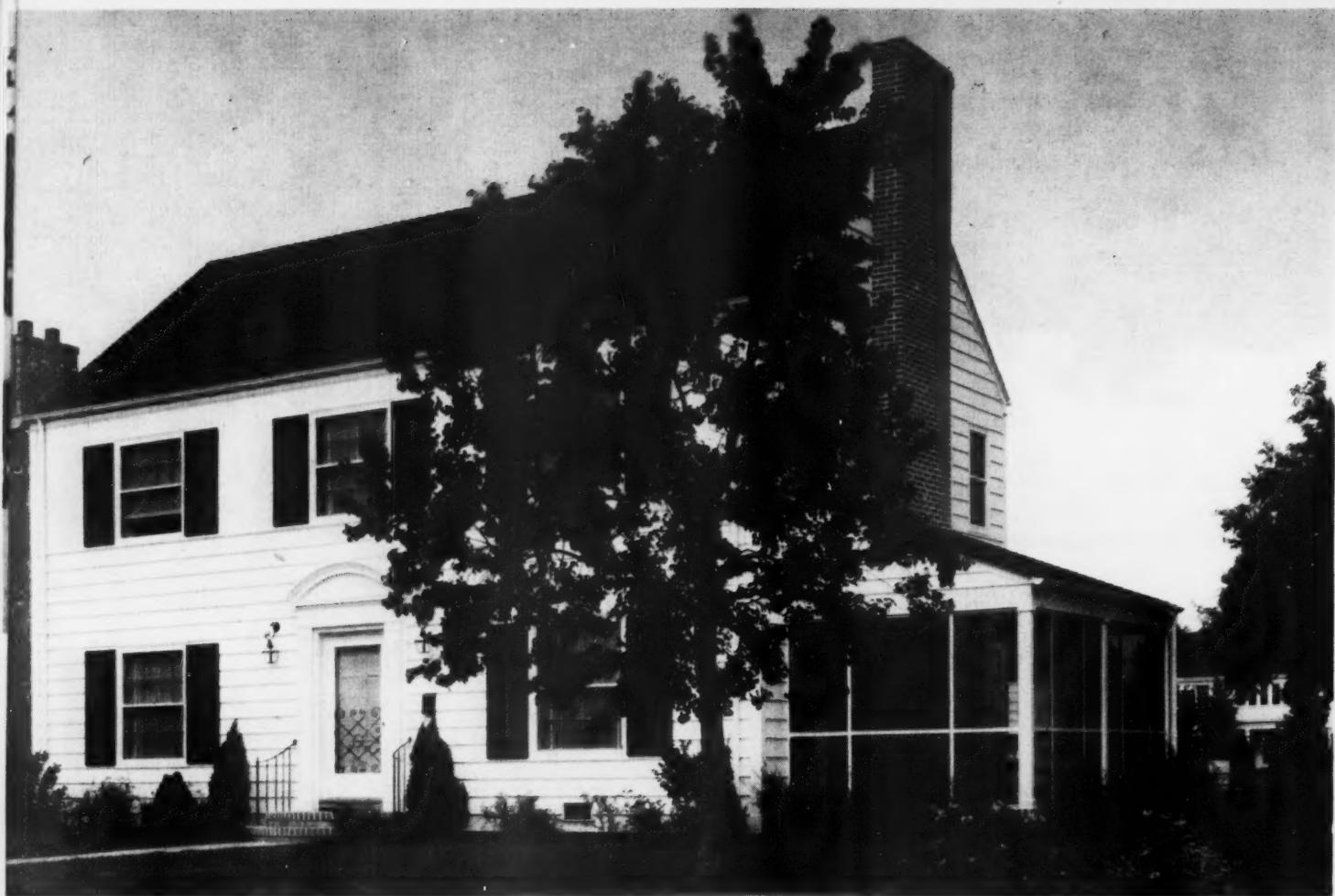


FLOOR PLAN of unusual "dog trot" Tennessee house.

Natural Stone Makes House Fit Locality

IN BOTH THE TENNESSEE VALLEY HOUSES shown on this and the opposite page, natural stone is used with very good effect. The government architects who designed these houses point out that using local stone is a sure way to make the house harmonize with the surroundings, and make it seem suited to its locality. In the Norris home, native stone is used in foundation, steps, chimneys and, in the case of the two houses here shown, in the walls as well. Where the stone wall comes in contact with the earth, it is thoroughly waterproofed to prevent dampness.

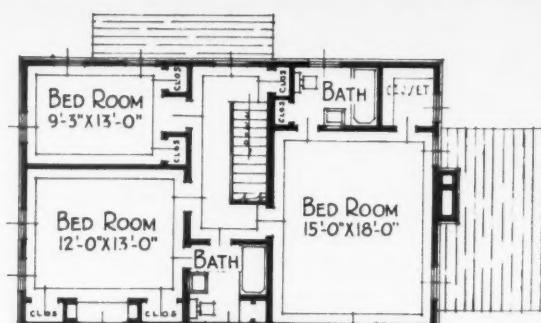
• AMERICAN BUILDER RECOMMENDED DESIGNS •



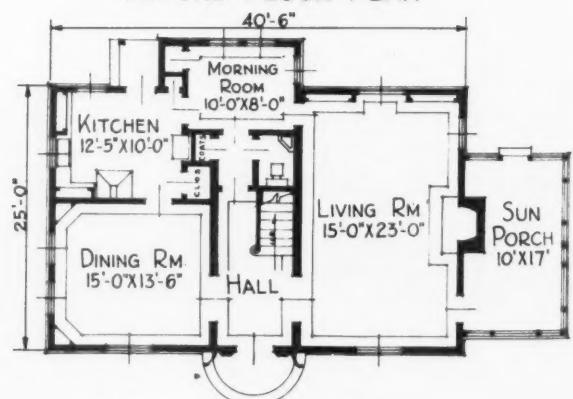
WIDE SIDING AND FLUSH BOARDS are used in this Houston, Tex., home located in River Oaks, residential section.



An unusually lovely built-in bookcase in living room.



SECOND FLOOR PLAN



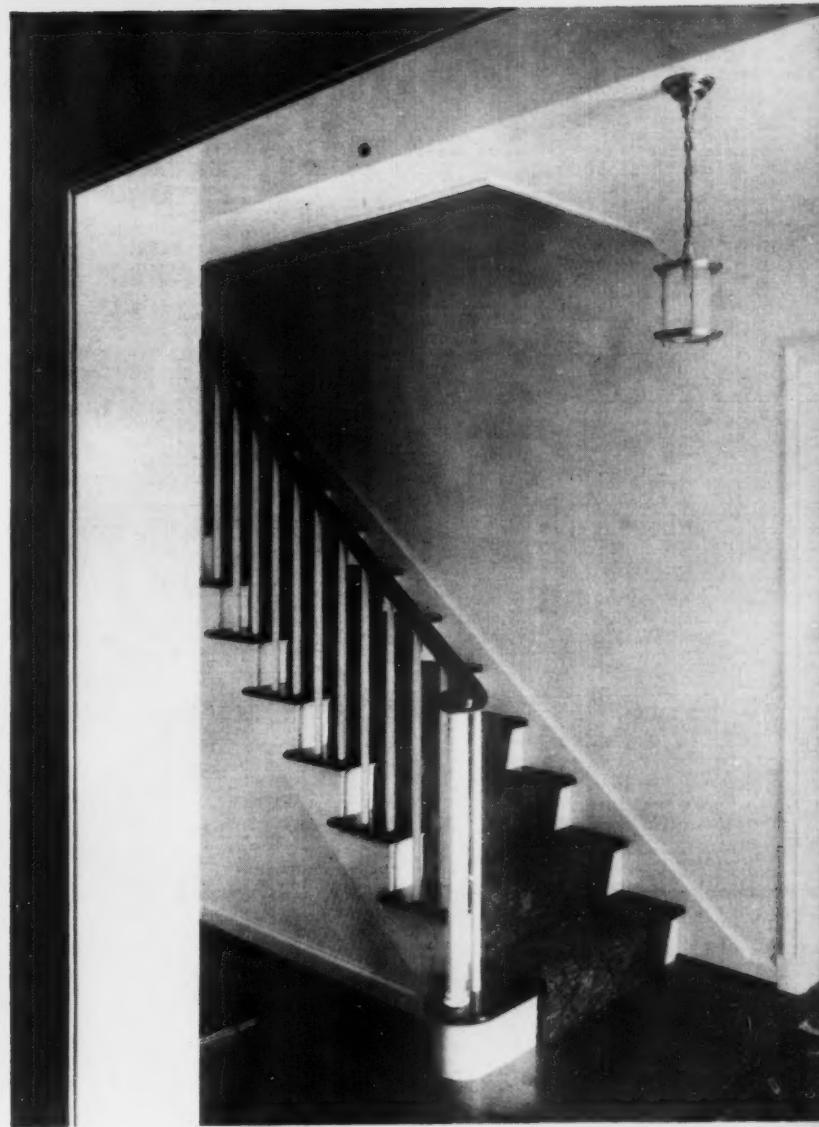
FIRST FLOOR PLAN

Floor plan is modernized Colonial.

HOMES THAT ARE ARCHITECTURALLY CORRECT



Detail of the pleasant Colonial entrance.



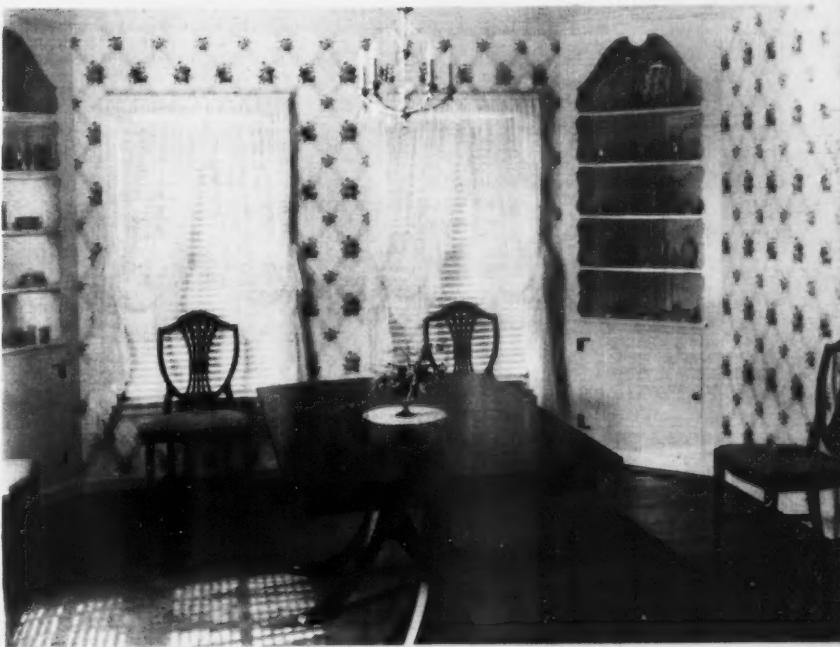
Beautiful detail, simply carried out, in hall and stairs.

River Oaks Home in Houston, Tex.

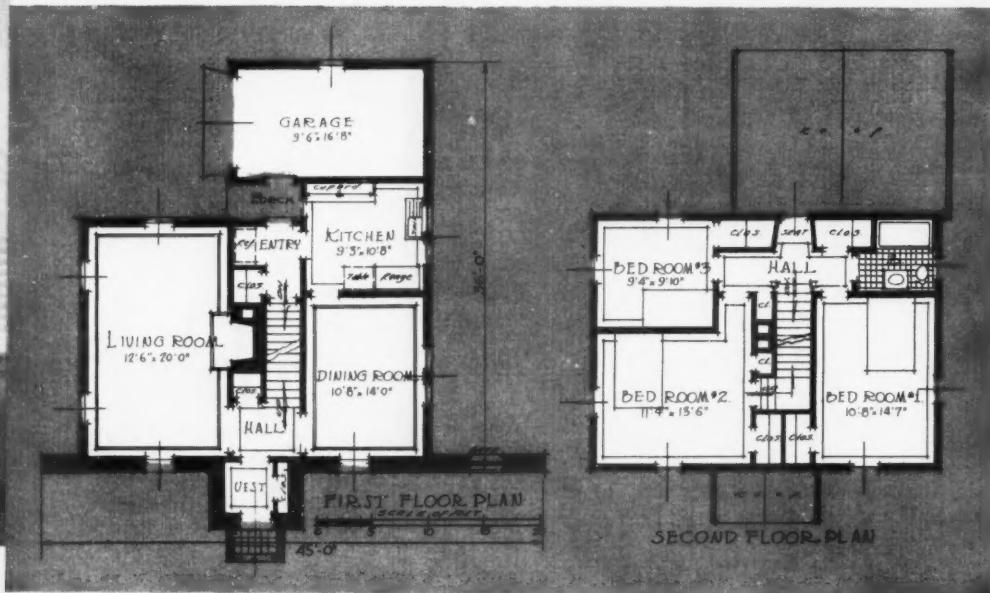
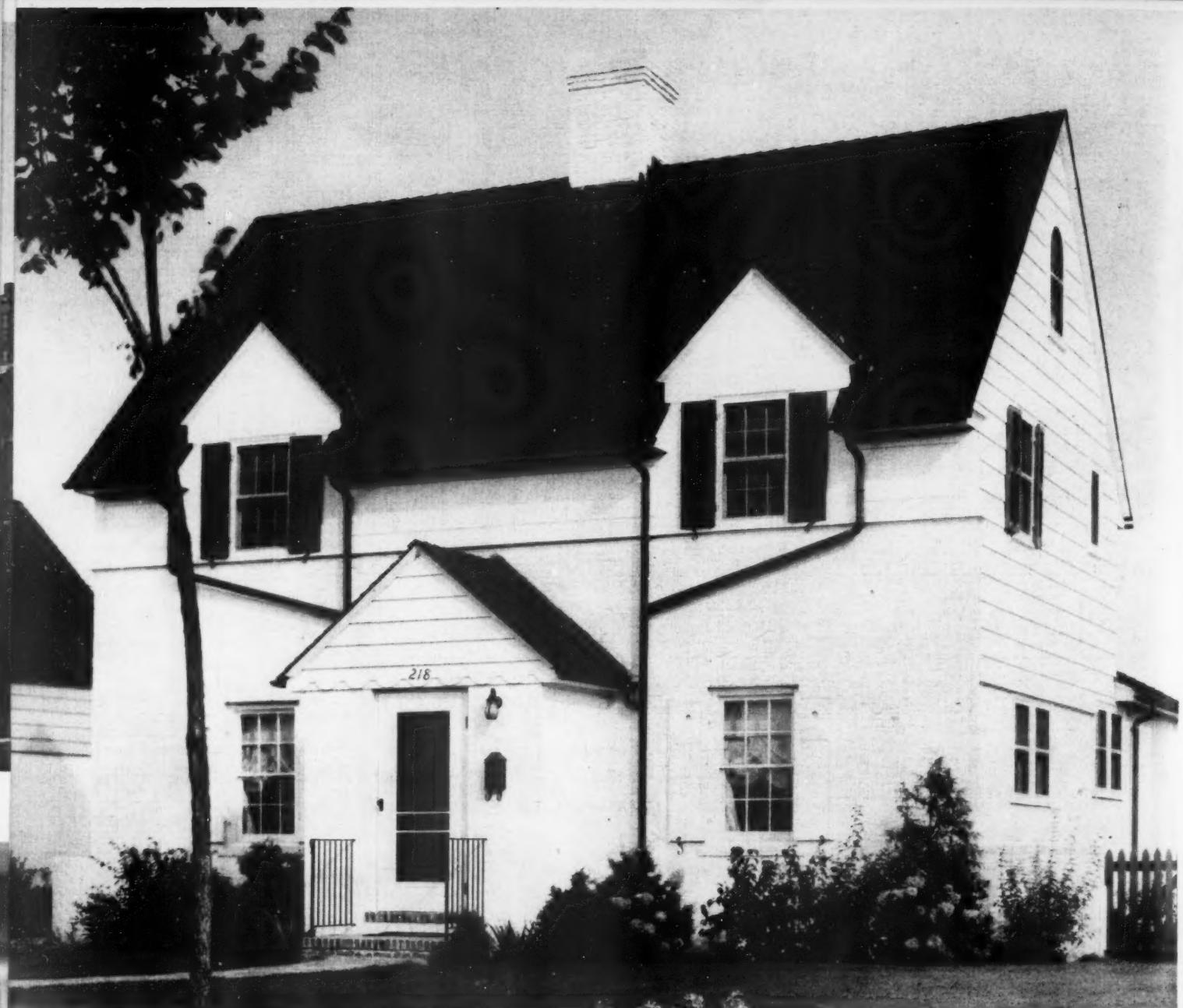
THE RIVER OAKS SUBDIVISION of Houston, Tex., is famed for its fine homes. Here is a recently completed small Colonial house in River Oaks designed by Architects Moore & Lloyd, and built by the Benson-Hall Co. The Colonial details have been handled with good success, producing a house with maximum comfort and livability.

ROOF IS WOOD SHINGLED, painted slate color. Blinds are rich blue-green, contrasting with creamy white exterior. The house is well lighted, well planned throughout, and illustrates the best tendency in small home design today.

COST KEY is 2.046—140—1061—44—28—17.



The Colonial dining room with enameled corner cupboards.



The Latest Style at Lowest Cost

IN THIS MODERN small home, recently built in Rochester, N. Y., common brick, stained white, wide siding and stucco are interestingly combined. R. C. Hunter of New York is the architect. The plan is very compact, the main part of the structure being approximately 30x25 feet. It is a quality home at low cost. Cost Key is 1.754-148-814-35-25-15.

Model Set of Open Specifications

Complete Text Presented for Specs. Covering Every Division of Home Building as Used by Lumber Dealers Everywhere, Constituting a Part of the Official Architectural Plan Service of Many Prominent Dealer Associations*

EXCAVATING

EXCAVATING AND GRADING:—The contractor shall accurately lay out the building as directed by the owner.

All trees and shrubs that are liable to be damaged during construction shall be protected by temporary casings or boxes.

Remove all top soil to a depth of 12 inches from that area which is to be excavated and from an additional area of six feet beyond all sides and place in a pile where directed.

Excavate for basement, foundation walls, areas, piers and all footings as may be necessary to the proper depth as shown on plans. All bottoms of walls and piers must be level, solid, undisturbed and kept free from surface drainings.

Fill in around masonry walls where directed by owner. All filling must be thoroughly puddled and tamped and must be brought up to within 8 inches of the finished grade.

Earth removed from excavations should be used for grading and filling as directed by owner and then covered with 8 inches entirely of top soil.

Contractor shall cart away all earth not used for filling and grading unless otherwise directed. All grading shall be covered 8 inches with the top soil which has been piled separately. This top soil shall be evenly graded and sloped as directed.

MASONRY

CEMENT:—All cement shall be portland cement of approved brand and shall conform to the specifications of the American Society for Testing Materials.

SAND:—All sand shall be clean, sharp, well graded and free from loam or foreign matter.

GRAVEL OR CRUSHED STONE:—Shall be clean, sound and free from sand and loam and shall range from $\frac{1}{2}$ inch to $1\frac{1}{4}$ inch in size.

CONCRETE:—All concrete (except when reinforced) shall be composed of one part of portland cement, three parts sand and five parts of gravel or crushed stone.

Reinforced concrete shall be composed of one part of portland cement, two parts sand and four parts of gravel or crushed stone.

WATER PROOFING:—Integral water proofing shall be mixed with concrete walls below grade and the basement floor.

FORMS:—All forms shall be erected to resist bending and buckling under load. They shall be straight, plumb, true and water tight. Forms shall not be removed until all concrete has set thoroughly. All concrete shall be poured into forms immediately after mixing and shall immediately be thoroughly tamped after pouring. All exposed concrete shall have a smooth, uniform, finish in which no surface stones must appear.

CONCRETE FOUNDATIONS FOR WALLS, PIERS, AREAS AND FOOTINGS:—Build of solid concrete according to plans. Concrete shall be spaded next to forms on the surface walls so that mortar will flush to the outside and prevent irregular surfaces. Any rough or hollow space shall be filled or pointed with cement.

CEMENT FLOORS:—This contractor shall make sure that all furring, pipes, floor drains, outlets, and all other work which shall go in or under the floors is in proper condition. Floor drains shall be furnished by the plumbing contractor but the mason contractor will cement in the floor drains and also give the plumber the correct elevations to which the drains will sit. All earth shall be leveled off and thoroughly tamped into a hard surface. If the earth floor of basement is sand the concrete can be applied directly to same; if of clay, then a leveling bed

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of cinders approximately 4 inches shall be used. Same to be carefully tamped in place. Over the entire basement floor this contractor shall lay concrete to a thickness including the top finish as shown on plans. Thoroughly tamp the concrete into place and carefully pitch to floor drains. Top surface shall be $\frac{1}{2}$ inch thick and composed of one part of portland cement to one part of clean, coarse, sharp sand thoroughly mixed and troweled to a smooth even surface. This finished surface must be laid before the under concrete has been allowed to set so that it will harden well and act as one solid stone.

Porch floors, terraces, slabs when shown in plans shall have $\frac{3}{4}$ inch finish. Where cement steps and coping are shown on the plans, build of concrete with troweled facings making solid stone.

All reinforced concrete floors, slabs, lintels, footings, etc., as shown on plans shall conform to drawings and details. All reinforcements shall be expanded metal of exact size as shown on plans and shall be carefully placed in the exact position as indicated on plans.

CONCRETE BUILDING BLOCKS—FOUNDATION:—Construct all exterior walls and piers out of hollow concrete blocks as shown to be such on the drawings. All foundation and basement walls to rest on a concrete footing. Measurements are given on plans for sizes of blocks and a $\frac{1}{4}$ inch mortar joint is intended. All blocks must be made of one part of portland cement, two parts of coarse sand and two parts of mixed gravel or crushed stone not to exceed $\frac{1}{2}$ inch in diameter. The greater portion of stone or gravel shall not exceed $\frac{1}{4}$ inch to $\frac{1}{2}$ inch in diameter. All to be thoroughly mixed and carefully manufactured. All blocks must be thoroughly seasoned before placing in wall. All mortar used in laying must be one part of portland cement to three parts of coarse, sharp sand and used as soon as mixed.

STONE FOUNDATIONS:—All stone walls, footings and piers shall be built to conform to sizes on plans. The stone used shall be approved local quarry stone. The lower course shall be extra large flat stones equal in length to width of footing or wall. All shall be carefully bedded on their widest face and laid in mortar composed of one part cement to two parts coarse sand. Each layer to have well flushed joints on both sides with mortar and firmly bonded. Walls to be neatly pointed on both sides.

CINDER CONCRETE BUILDING BLOCKS:—Blocks shall be laid according to manufacturers specifications. All shall conform to plans and drawings.

STRUCTURAL CLAY TILE WALLS, PIERS, ETC.:—Tile shall be laid according to manufacturers specifications. All shall conform to plans and drawings.

STRUCTURAL CLAY TILE—GLAZED:—Tile shall be laid according to manufacturers specifications. All shall conform to plans and drawings.

STONE WORK ABOVE GRADE:—All exterior facing above grade except cut stone trim shall be local quarry stone. Same to be furnished in random irregular sizes, but shall be 4 inches thick except bond stones which shall be 8 inches thick. Joints shall not be more than $\frac{1}{2}$ inch wide and shall be raked back $\frac{1}{4}$ inch at the time stone is set. All stone shall be set in non-staining cement mortar and shall be laid up to conform to drawings.

BRICK WORK:—Face brick shall be furnished by the contractor but selected by the owner. The contractor shall allow \$30.00 per thousand for the brick delivered on the job. The difference between \$30.00 and the cost per thousand to the contractor for the brick selected by the owner shall be the unit price for computing the amount to be added to or subtracted from the contract price. All face brick shall be protected from damage. Face brick shall be laid in lime mortar mixed in proportions of one part of lime, one part of cement to four parts of sand. All shall be laid strictly in accordance with designs as shown on drawings and shall be well bonded to backing. All joints shall be neatly struck.

Common brick used for backing and about the building, unless otherwise specified shall be hard burned common brick laid wet in cold dry weather and dry in warm damp weather. All common brick shall be laid in fresh lime and sharp sand mortar. All exposed joints in the brick work shall be neatly struck. All shall be well bedded, tied in every 7th course and laid in regular bond, leaving no empty spaces in

walls. Work in seasoned lath every 12th course inside of enclosing walls and walls shown as furred. All common brick for facing exterior walls shall be extra hard burned brick with joints and exposures as per plan or as directed by owner. Fill in and back close all facing work. Set all door and window sills. Cover the walls from weather and brace them thoroughly. If bricks are laid below grade use only cement mortar composed of one part pure cement and two parts coarse sharp sand. When brick sills are shown on plans, carefully lay same in mortar composed of one part portland cement to two parts sand. Provide and install metal joints, anchors and metal ties as may be required to complete all work.

CHIMNEY:—Build all chimneys of as per plans, neatly topped. Flues to be smoothly plastered inside. Finish and put in all thimbles where shown or directed. Brick chimney smoke flues to be lined from basement to above roof with best fire clay flue lining (see sizes on drawings) neatly cut out for stove thimbles. The flue for heating plant to be carried up individually of all other flues. Ventilating flues to be built where shown on plans. Construct chimney cap as shown on drawings. Mortar to be one part cement to three parts sand.

FIREPLACE:—Build hearth supports at the same time chimney is built and build fireplace according to plans. Mantel face brick to be laid with mortar. Joints to be of color to suit owner. Provide and lay fire clay brick lining with fire clay mortar as shown on plan. Hearth floor to be built of Install doors and ash dumps provided by another contractor.

CLEANING:—All brick shall be left clean and free from mortar stains or other defacements. Any division of joint shall be carefully pointed up.

CUT STONE:—All cut stone shall be locally quarried stone when possible. Must be uniform in color and quality and free from imperfections impairing its durability. Shall be cut in neat, sharp angles according to sizes and dimensions as shown on plans, and delivered properly fitted with all necessary drillings and lugs or anchors, etc. All shall be laid according to its stratification.

Upon the completion of the mason work the stone work shall be carefully cleaned with soap or soap powder, boiled in clean water applied and brushed with a stiff fiber brush. No acid shall be used in cleaning stone work. Joints shall be raked out and brushed clean $\frac{3}{4}$ inch deep and after a thorough wetting shall be pointed flush with mortar consisting of one part stainless cement, two parts clean white sand and cold lime putty to make a stiff mixture as can be worked.

PLASTERING AND STUCCO

SCOPE OF WORK:—This shall include the plastering of all interior walls and ceilings and the application of lath, corner beads, etc., as necessary and all exterior stucco and lathing as may be shown on plans.

INTERIOR LATHING:—Plaster base to be applied as directed by the manufacturer; if of wood lath, cover all walls and ceilings throughout with dry No. 1 lath. Joints broken every 12 or 14 inches and lath at least $\frac{3}{8}$ inch apart on ceiling but little closer on side walls. There must not be any lathing through angles from one room to another. Should the lathers find any corners not properly secured they must not lath until it is made permanent by the carpenter and in all cases lath shall go to floor behind base and wainscoting. All inside corners shall be reinforced by strips of metal lath and all exposed corners protected with metal corner beads. Expanded metal lath weighing not less than $2\frac{5}{10}$ pounds per square yard shall be securely fastened to all arch soffits.

PLASTER:—All surfaces to be plastered shall have two coats of prepared plaster applied strictly in accordance with the manufacturer's directions. Water only to be added to the prepared plaster. Thoroughly mix before using. Finish with thin coat of finish plaster. Put on each coat of plaster with considerable pressure. Broom the first coat before it is set and then follow with the second or browning coat, which will be rodded to a true and even surface. When dry apply finish coat and bring to perfectly smooth and even surface. The plaster contractor shall remove all debris and leave the job broom clean upon completion of his work.

Keene's cement shall be used for all wainscoting 4 feet 6 inches high in kitchen, bath and toilets. Mark off in tile patterns, as may be directed by the owner.

EXTERIOR LATHING:—All exterior metal lath when shown on plans shall be expanded, painted or galvanized and shall weigh not less than 3 4/10 pound per square yard.

STUCCO:—All stucco shall be mixed and applied according to the specifications of the Portland Cement Association. Color and texture of finish coat shall be selected by owner.

CARPENTRY

FRAMING AND DIMENSION LUMBER:—All shall be sound, well seasoned, free from large, loose or dead knots, or other imperfections liable to impair the strength or durability of the timber. All shall be No. 1.

For sizes of framing timber see plans and sections. All floor joist must be sized to widths and set crowning-edge upward. All joist, studing, rafters and other framing timbers shall be set 16 inches on centers, unless where otherwise mentioned on drawings. Frame double-headers and trimmer joist, well spiked together, around all stairways, chimney breasts, etc. All joist under partitions shall be set double and triple. Bearing partitions shall be cross-braced. All door and window studs shall be set double; truss over all openings in bearing partitions in a substantial manner. Angles of rooms must be made solid. All joist shall be well cross-braced with good sound stuff, well fitted at the angles and put in as soon as joists are leveled. Frame horizontal collar beams to rafters above the upper ceiling joist, well spiked to long rafters. Nail 1x1 grounds around all door openings, around all rooms for base, also where chair rail and hook strips are to be placed. Outside wood steps shall have substantial carriages set not over 3 feet apart unless otherwise shown on plans. All railing, blocks, etc., shall be worked according to plans.

SHEATHING FOR OUTSIDE WALLS:—All box sheathing shall be 1x8 shiplap No. 2..... All shall be well nailed at each bearing with three 8d nails. All joints shall be broken. Sheathing to extend from foundation walls to rafters. Care should be taken to avoid unnecessary waste at door and window openings. All loose knots shall be cut out.

SUB-FLOORING:—Cover the floor joists with 1x6 No. 2..... All shall be laid close and nailed to every joist. All joints shall be broken on bearings only. All flooring damaged by plumbers, gasfitters, furnace men or other mechanics must be replaced by the carpenter in first-class condition before it is covered with the building paper and finished floor. When shown on plan strip with 1x2 pieces before laying finish floor.

BUILDING PAPER:—Cover the entire exterior sheathed surface with..... Building Paper, all joints well lapped at least 6 inches and run in under all casings, around windows and doors and shall lap around all angles and corners. Also cover all rough floor surface with one thickness of..... Building Paper after all plastering is completed and dry.

ROOF SHEATHING:—Roof boards shall be..... laid as per plans, and shall be nailed with 8d nails on every rafter with joints broken on bearings only. Strip roof boards with..... when shown on plans.

SIDING:—All siding as shown on plans shall be..... and laid with..... lap. Cut close joints against all casings, corner boards, etc., and properly nailed with six or eight penny nails every 16 inches. The carpenter is to notify the painter to prime all siding as soon as it is placed in position.

SHINGLES FOR WALLS—STAINED:—Shall be..... laid..... inches to weather and nailed with..... d. nails..... to each shingle.

SHINGLES FOR ROOF:—The entire roof shall be covered with..... inches to the weather. Make perfectly watertight around all chimneys, etc. All shingles shall be nailed with at least two galvanized or cut shingle nails to each shingle. The carpenter must see that all sheet metal flashing is properly set in place while shingling, as he will be held responsible for all leaks in the roof after all shingling is completed. All shingles over 8 inches in width shall be split before using.

EXTERIOR FINISH AND TRIM:—All exterior finishing lumber, such as facias, verge boards, planciers, friezes, watertables, belts, corner boards, treads, risers, etc., shall be.....

All finished lumber shall be well fitted in place and primed by painter as soon as work is completed. All shall conform to the plans, elevations and detailed sections. All exterior mouldings such as crown mould, bed mouldings, etc., must be put in position and well fitted at corners so as to leave the whole in a perfect condition when completed. All shall be worked to conform with detail drawings as shown on general plans. Casing nails are to be

used for this work. Cornice soffits shall be built up as shown on plans. If one-piece stock, or $\frac{1}{2}$ inch ceiling is to be used, the same shall be well driven up and laid with close joints and blind nailed with 6d casing nails. Where half timbers are used with stucco walls, the inside corners shall be grooved to create a solid bond and joint. All half timbers shall be securely nailed to backing in a substantial manner.

Place all columns, newel rails, balusters, etc., as indicated on drawings, all shall be well nailed and put up in a proper mechanical manner, and all nails shall be properly set. All lattice work where shown on plans shall be worked out as indicated on drawings. All shall be done in first-class, workmanlike manner and left ready for the painters. Porch ceiling, unless otherwise shown, shall be $\frac{1}{2}$ inch narrow beaded and shall be driven up close and blind nailed with 6d casing nails.

PORCH FLOORING:—Shall be..... and shall have at least $\frac{1}{4}$ inch drop to every foot in depth and shall be laid in one-piece lengths to cover entire porch and allow for..... nosing. Shall be driven up close and blind nailed with 8d casing nails.

ATTIC FLOORING:—Attic flooring shall be..... and shall be laid close and nailed with 8d nails. Blind nail and face nail.....

FINISH FLOOR:—After all plastering and cement work is completed and dry and all plumbing, tubing and pipes have been installed, cover the entire rough floor surface with..... as before specified, and then lay the finish floor as follows:

Oak Flooring.....	for.....
Maple Flooring.....	for.....
Yellow Pine Flooring.....	for.....
Fir Flooring.....	for.....

All shall be smoothed, scraped, sand-papered and thoroughly protected. Smooth all uneven places and clear off all stains, finger marks, etc., from floors before turning over to painter.

DOOR AND WINDOW FRAMES, LOUVRES, ETS.:—Shall be clear Cypress or White Pine stock. Outside door frames shall be of sizes as marked on plan, shall be rabbed $\frac{1}{2}$ inch by thickness of doors. All inside door jambs shall be $\frac{1}{2}$ inch thick by thickness of partitions, of same wood as trim of wood in which it faces and fitted with $\frac{3}{8} \times 1\frac{1}{4}$ inch stops. All single sash frames shall be regular plank frames, rabbed $\frac{1}{2}$ inch by thickness of sash. All frames for check rail windows shall be of the form, styles and dimensions as marked on plans; all pulley stiles shall be $\frac{1}{2}$ inch thick and fitted with pulleys.

DOORS:—All doors shall be of the size and style as indicated in the drawings. Front doors shall be.....

Balance of outside doors shall be..... Inside doors shall be.....

Provide and install door or panel at base of bathroom partition as shown on plans, which shall be fitted with suitable casing, jambs and trim.

WINDOWS, SASH, TRANSOMS AND SHUTTERS:—If of wood, shall be clear Cypress or White Pine stock. Windows shall be of the size and style shown on plans. All check rail or double hung windows shall be plowed and bored for weights and shall be properly fitted and evenly balanced. If windows are put into frames before the house is plastered, they should be refitted and balanced on weights after the plaster is dry. Care must be taken that all are well and evenly balanced and work freely in the pulley stiles. All casement, sash and transoms shall be hung to swing as desired by owner, where not otherwise mentioned. Provide and hang all shutters as indicated on plans.

INSIDE FINISH:—All finish shall be clear, sand-papered clean and smooth. Install and place picture moulding where directed. All windows to have proper stools and aprons. Outside doors shall be fitted with thresholds. Provide and put in place beam ceilings, wainscot, columns, seats, book cases, mantel shelf and all cabinets, etc., where same are shown on plans. Provide and place angle heads where required. Construct and set in place all shelving as shown on plans and as directed by the owner, all shall be complete in every respect and ready for use. Closets shall be trimmed with plain casings and base, and to have hook strip fastened to walls and to extend around entire closets with hooks fastened to same about 8 inches apart. All inside finish shall be..... unless otherwise mentioned below, in which case the room mentioned after the kind of wood shall have trim of that wood.

Oak.....
Birch.....
Gum.....
Yellow Pine.....
Fir.....
Cypress.....
White Pine.....

The style of casings, base, picture mould, etc., shall be selected by owner.

CABINETS:—Provide and install all cabinets and mantels as per plan. All shall be of same finish as room in which they are located. All cabinets shall be placed and set in a proper and workmanlike manner.

STAIRWAYS:—Build all stairs as per drawings, in the most substantial manner, or as here-

inafter specified; all made from thoroughly seasoned materials; treads and risers tenoned and grooved together, both front and back; balusters dovetailed and wall-strings glued to treads and landings. All treads and risers housed into wall-strings, wedged and glued thoroughly. Stair builder to box, cover and protect stairs from injury, and fur off all soffits ready for plastering.

Rear and attic stairs, if such are shown on drawings, shall have 2x10 carriages, $1\frac{1}{2} \times 10$ -inch treads, $\frac{3}{8}$ inch risers and $\frac{3}{8}$ inch wall string. Shall be fitted with cove mould under nosings. Provide suitable hand rail for attic stairs. Cellar stair shall have 2x10 carriages, $1\frac{1}{2} \times 10$ treads and 1x8 risers. Shall be provided with 2x4 rails, 4x4 posts and completed in a first-class manner.

CLOTHES CHUTE:—If shown in plan shall be lined with.....

Provide and install doors as per plan. Doors shall be fitted with suitable hardware. Doors and trim shall match room or closets into which they open. Provide suitable receptacle in basement.

SCUTTLE:—Construct a scuttle door in ceiling, where shown on plans and case in neat manner.

HARDWARE:—All finishing hardware will be furnished by owner. Same shall be received, sorted, cared for and installed by this contractor. He shall sort and store finishing hardware immediately upon delivery and shall notify the owner of any hardware not delivered or incorrectly delivered. This contractor shall be solely responsible for all hardware after delivery and shall make good at his own expense any hardware which may be injured or lost following delivery.

All rough hardware of every kind required for the finishing of the building shall be furnished and installed by this contractor, including all spikes, nails, screws, sash weights, window pulls, cord, joist anchors and wall plate anchors and any and all other like items of rough hardware.

PROTECTION:—This contractor shall provide protection for all carpentry work installed by him during the execution of this contract, same to be saved from all injury until completion of the building and he shall replace any work injured due to his failure to properly protect it.

IRON AND STEEL

SCOPE OF WORK:—This contractor shall deliver to the building site all miscellaneous steel and iron necessary for the completion of the building. This includes wrought iron gates, grills, hinges, hinge plates, steel windows and steel sash, fireplace equipment and all steel columns, beams and lintels. Steel windows and iron grates, grills and railings shall be installed by this contractor. The remainder of steel and iron to be placed by other craftsmen as needed. All work specified herein must be installed by experienced craftsmen, only the highest type of workmanship being acceptable.

This contractor shall take all measurements at the building and may be required to make all work set exactly and he shall be responsible for the accuracy of such measurements. All materials shall be of standard quality as required by the standard specifications covering the material in question. Unless otherwise definitely mentioned this contractor shall set in place all of the work covered in this contract, same to be in strict accordance with the detailed drawings. He shall do all drilling which may be required and shall furnish all necessary bolts, rivets, screws, etc. Provide and install coal chute when shown on plan.

This contractor shall give all items included in this contract shop coat of paint. Paint except for damper shall consist of a lead and oil paint. Before applying the paint this contractor shall make certain that all rust, dirt and grease spots are removed.

ROOFING AND SHEET METAL

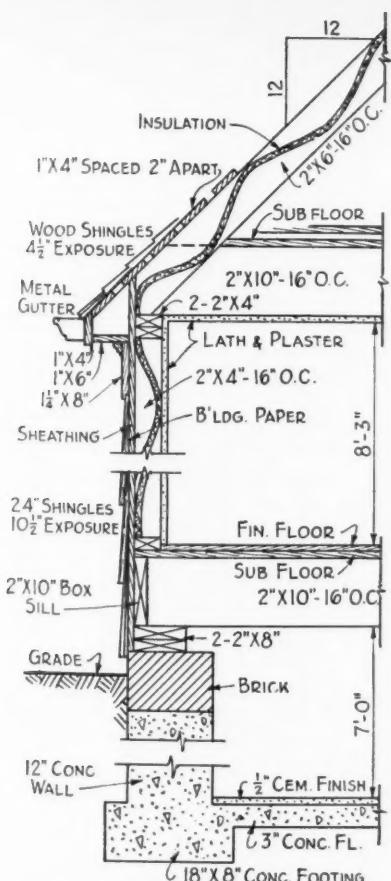
ASPHALT, ASBESTOS OR PREPARED SHINGLES:—Provide and cover.....

roofs with..... shingles, and lay according to the specifications issued by the manufacturer. Care should be taken to see that all joints are well lapped and solidly nailed with large head nails as furnished. The contractor for this work shall see that the roof sheathing is properly laid and well nailed before beginning.

CANVAS ROOFING:—Over..... lay 12-ounce duck. Thoroughly soak in water before laying. First paint the D. & M. sheathing with thick coat of white lead and oil paint, then stretch the canvas and nail it in position with large headed roofing brads. The canvas shall receive first coat of paint before it begins to dry.

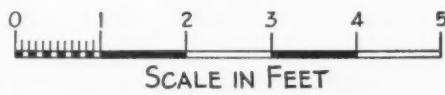
SLATE ROOFING:—The entire roof surface shall be covered with extra heavy slating felt and over this surface slate the roof with roofing slate. Slate shall be..... Each slate must have at least two copper slating nails and must be so laid so that the third course will lap the first at least three inches. All hip and valley slate shall be cut to the proper bevel and must be well bedded with slaters' cement. All slating must be done in a thoroughly mechanical manner and be water tight at comple-

(Continued to page 118)

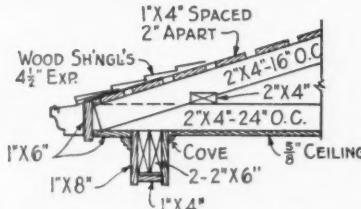


Low Cost FHA "Quality Cottage"

THIS LOW COST COTTAGE is planned and specified for long life and permanent satisfaction. It is the type of house and the type of quality construction needed to back up the 20-year loans being made under the Federal Housing Administration's financing plan. The standard specifications used in the construction of this house, described on the opposite page, assure a fixed quality. The framing details on next page are worthy of study, as they clearly show sound practice for a low cost home. Materials and equipment are of standard size and quality, carried in stock by most lumber dealers so that extra expense and delay are not encountered in its construction.



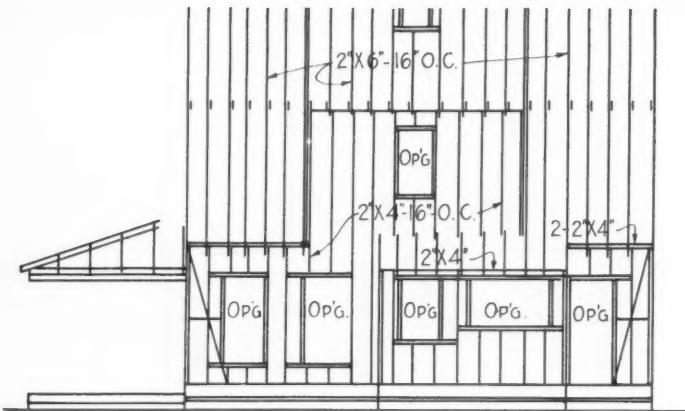
Cost Key is 1.476—119—858—
36—17—14.



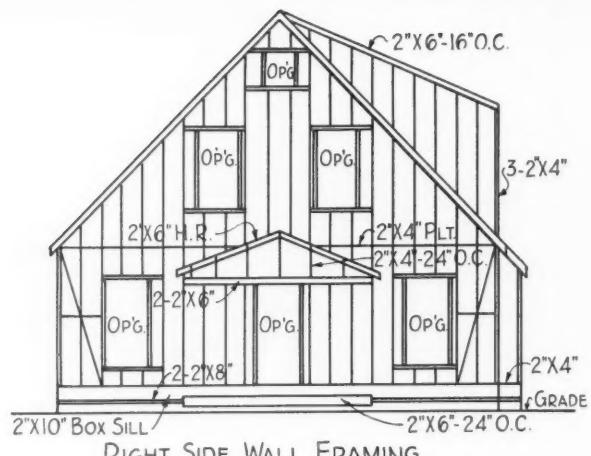
SIDE PORCH CORNICE DETAIL

Complete plans and framing details for this house are given on the following pages.

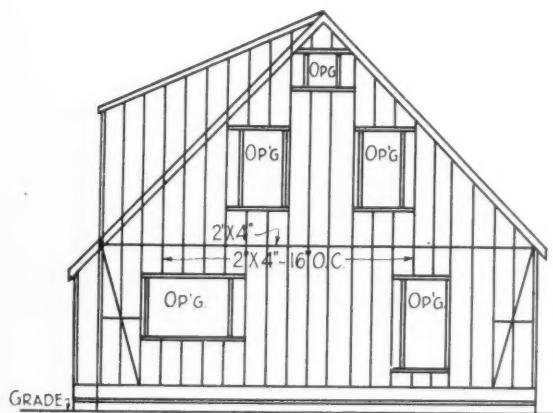
• THE AMERICAN BUILDER HOUSE OF THE MONTH •



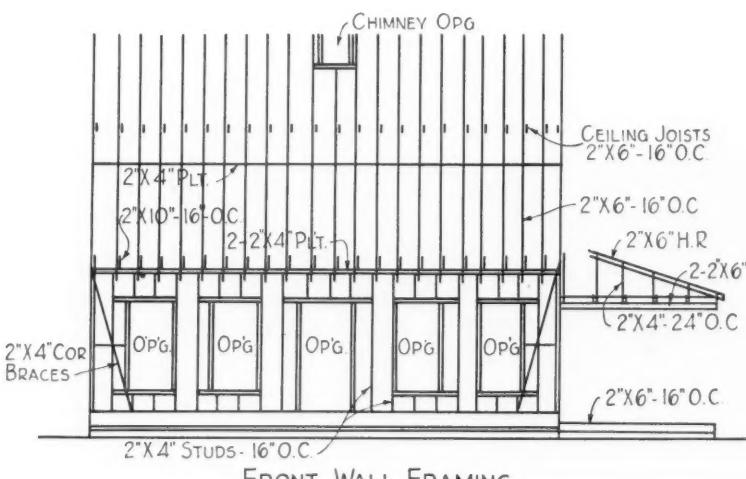
REAR WALL FRAMING



RIGHT SIDE WALL FRAMING

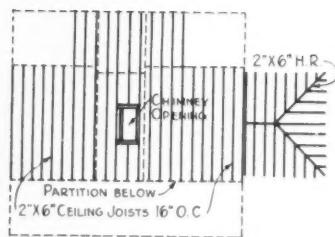


LEFT SIDE WALL FRAMING



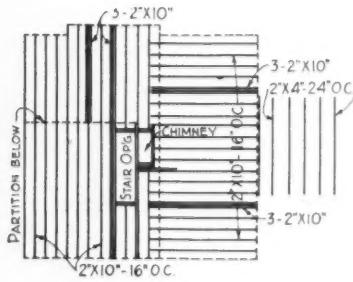
FRONT WALL FRAMING

Quality Framing Details

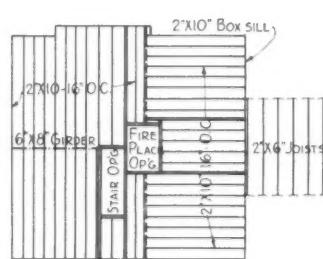


CEILING FRAMING

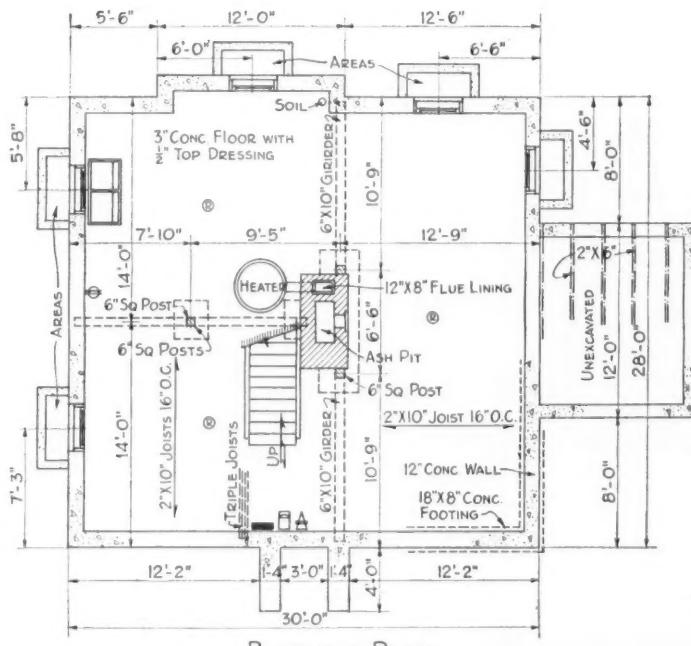
QUALITY construction calls for complete advance planning and detailing. These quality framing details should be considered the minimum in building long-term financed homes. This is house design No. 754-B of the National Plan Service.



SECOND FLOOR FRAMING

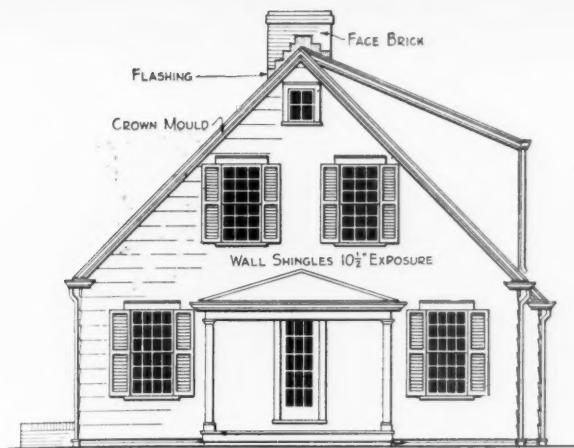


FIRST FLOOR FRAMING

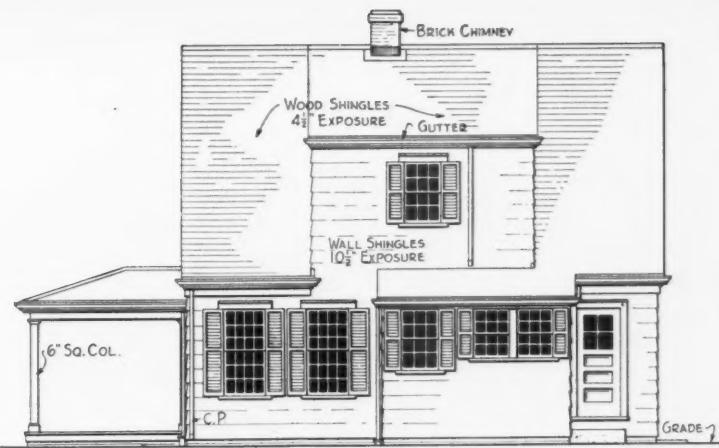


BASEMENT PLAN

DETAILS FOR STUDENTS OF GOOD HOME PLANNING

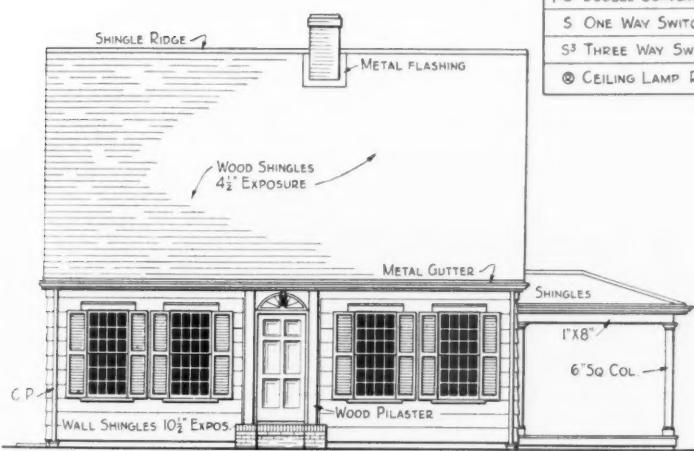


RIGHT SIDE ELEVATION

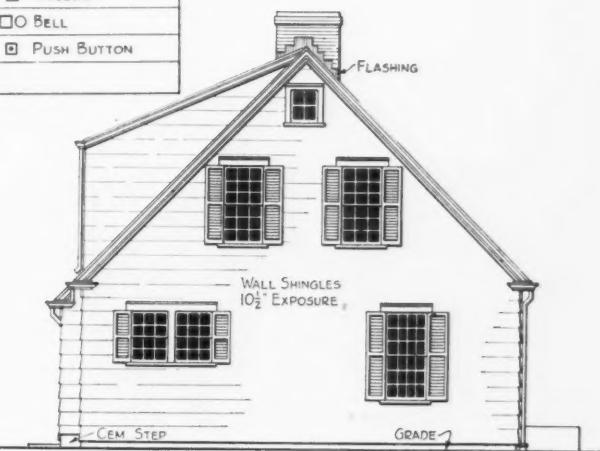


REAR ELEVATION

ELECTRIC WIRING SYMBOLS	
□ CEILING OUTLET	■ PANEL BOARD
□ WALL BRACKET	□ METER
□ SINGLE CONVENIENCE OUTLET	► TRANSFORMER
□ DOUBLE CONVENIENCE OUTLET	□ BUZZER
S ONE WAY SWITCH	□ BELL
S ³ THREE WAY SWITCH	□ PUSH BUTTON
◎ CEILING LAMP RECEPTACLE	

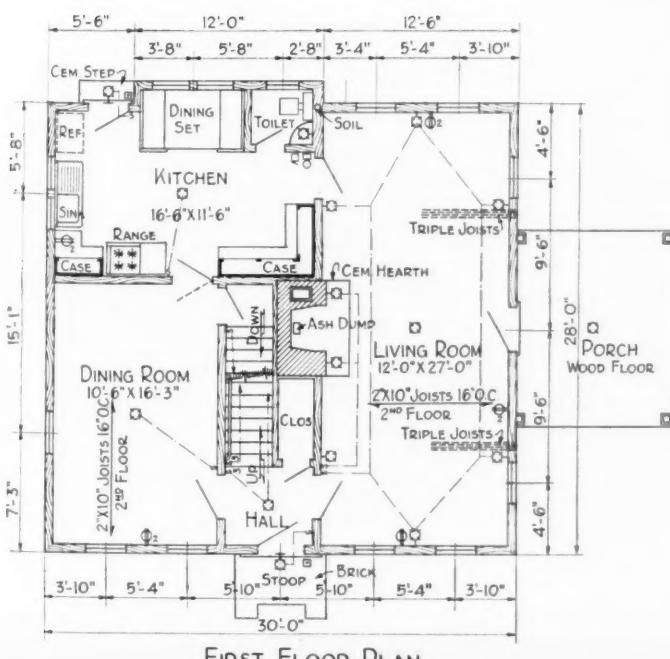


FRONT ELEVATION

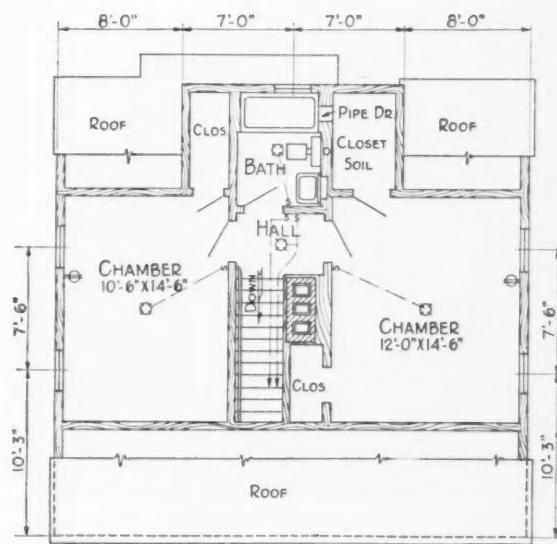


LEFT SIDE ELEVATION

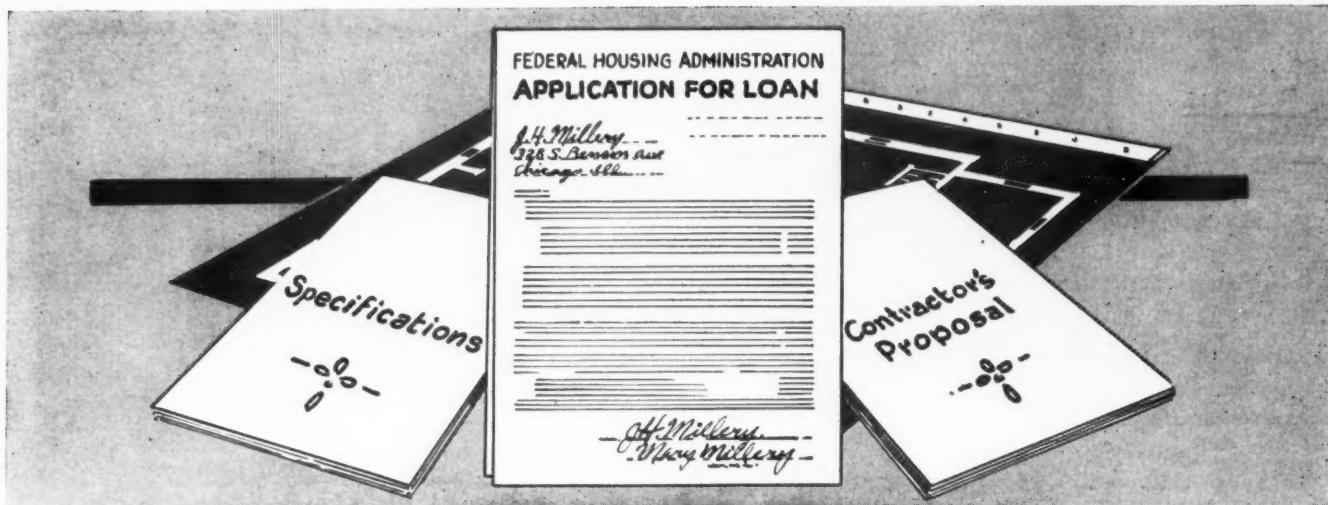
0 5 10 15 20
SCALE IN FEET



FIRST FLOOR PLAN



SECOND FLOOR PLAN



HOME EQUIPMENT

Nothing Down—5% Interest—Up to 20 Years to Pay

New opportunities for lower costs under FHA financing. Heating, plumbing, electrical, air conditioning planned in advance and included under one contract give added responsibility.

By V. L. SHERMAN

Department of Mechanical Engineering,
Lewis Institute of Technology, Chicago

THE frost is coming out of the ground; and while to some this only means that the footing underneath is soft, the majority know that the time for building work is here. Even the hard-frozen skeptics are thawing out and beginning to note a feeling of "generosity" among the bankers. It is expected that it will not be long before these skeptics will be sufficiently thawed to recognize the difference between "generosity" and good investment.

The time for work has certainly come when homes may be built as they should be built, under a single long-term mortgage at a very low rate of interest, and endorsed by the Federal Housing Administration. Could there be a better investment?

Good investment means good security. The new homes of today will be all of that. Up to twenty years for payment; five percent as interest; and a home substantially and attractively built and completely and substantially equipped! We are well rid of the idea that homes should be built for speculative purposes, and that so long as equipment was enough for present necessity and looked substantial, all requirements were met. The proposals of the Federal Housing Administration have changed all that.

For such a wholesome long term loan as the FHA financing allows there must be equally wholesome planning, material, and workmanship, and a wholesome completeness. The real general contractor is thoroughly up to it. The FHA requirements are en-

tirely in his favor. The general contractor in his complete responsibility is released from the old restrictions which made for cheapness and "profit." No longer need he skimp to meet the bid of some itinerant jerry builder. With the long term to the maturity of the mortgage, with the low interest rate, with complete plans and specifications filed, with the idea firmly fixed that no additions will be later required, he is prepared to build as he would like to build.

While the general subject for this article is air circulation in homes, I would like to digress a little to emphasize the point of completeness in building. Just now a friend, a building contractor, dropped in to discuss some points in the plans of an attached garage. Time was when a garage was a sort of separate shed addition on the premises. A place to store the car, to run to through the rain, perhaps a roofless cubicle after a high wind. Now we have it as part of the house. It is heated, lighted, and equipped with plumbing. The attached garage need not be glorified to bring out its points. It is part of the picture now, not a separated shed.

Turning back to the matter of skeptics I would like to speak of one whom I have known for some time. Perhaps we can call him ultra-conservative, even reactionary. In his writings on air-conditioning of homes he expressed the opinion last year that moderately priced air conditioning equipment for the home was in the indefinite future. Advising him to look more closely into the matter and giving him some names of different manufacturers who had tackled the question in a thorough manner I waited to see whether he would change his mind. He has so far changed that he left a meeting the other night fairly disgusted because the speaker had spoken slightly of the control of humidity within the home.

HEATING – AIR CONDITIONING – PLUMBING AND WIRING

The question of control of the quality of the air within a house is a lively one just now. The engineers and the firms with whom they are engaged have not studied this question merely from curiosity. They have the results of their study and are entirely able to oppose any arguments as to disabilities. Besides this the progress of the work in air conditioning has brought about co-operation among many lines of manufacture, and their combined studies make their positions stronger than ever. Their studies in theory have not outrun their studies of production or manufacture. With an increasing market their equipment has improved as the costs have lessened.

Taking the single phase of air conditioning known as air movement we find that if the air is clean and not uncomfortably warm or cool we have the strongest factor for comfort. In the times past, when, with hot-air heat, the circulation of the air through the house in winter weather depended on the difference in densities between the air coming from the warm air registers and the cool air returning to the furnace, the temperatures were necessarily high. The higher the warm-air riser and the lower the furnace the more readily did the air circulate. With these high air-delivery temperatures it was the second floor and the third floor that got the most heat, and it was the first floor that suffered most when there was lack of heat. Sometimes dampering helped, but not very much, because it was necessary to damper the leader in the basement. This was far too much bother.

On the other hand by using an efficient fan or blower a much greater supply of air can be circulated within a very comfortable temperature range. No longer is 185 degrees necessary at the register, or as would now be said the warm air grille. There is no longer any need for the big register in the floor that so many housewives hated. The air does not drift as it used to, lying in layers of hot and cold throughout the room.

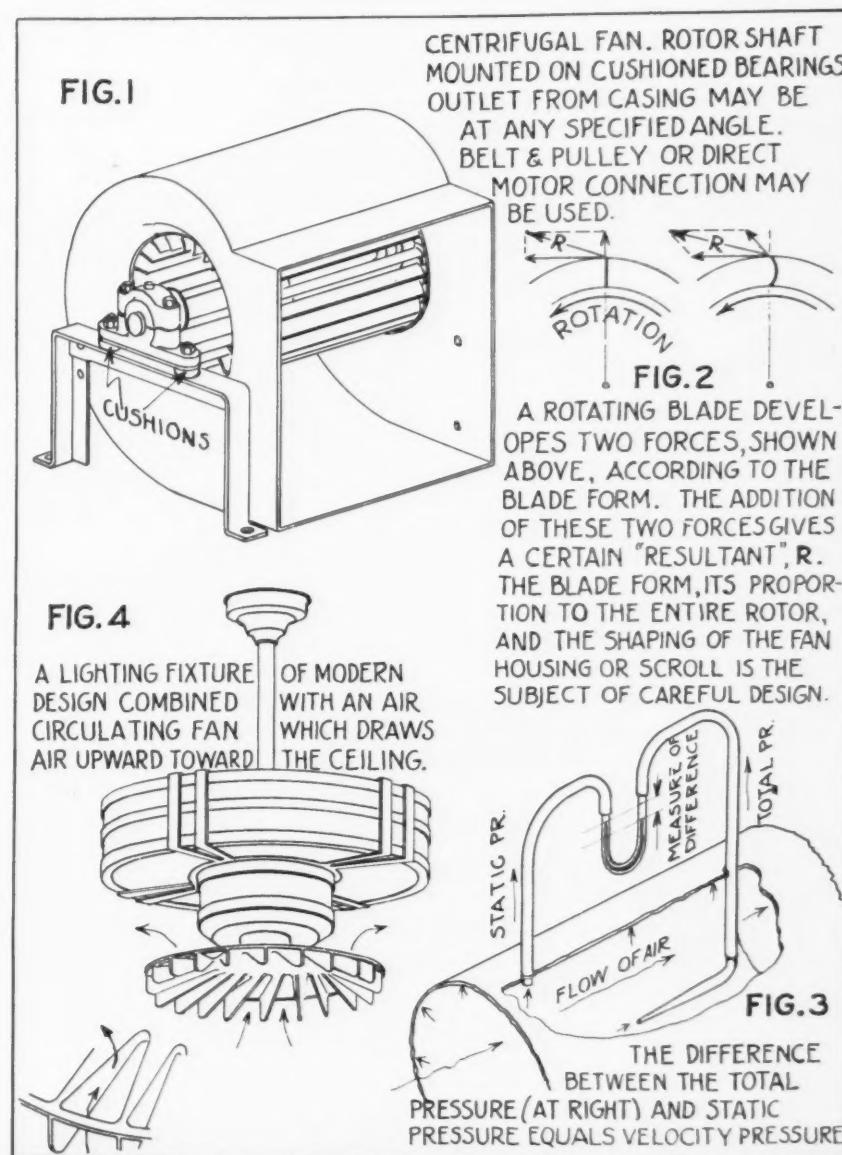
When building prices increased in years past it became necessary to build moderately priced homes with smaller rooms. The ceilings were lowered. Warm air heat became a problem because with the smaller room and lowered ceiling an increased portion of the floor-space became too cool for comfort. We came to talk about convection currents of air along exposed walls. The lowered ceilings intensified the differences in temperature between floor and ceiling.

Part of the solution for this was to change the type of heating system, which solution eliminated some of the troubles but added some others. Part of the solution was to insulate the exposed walls. But my own opinion is that the greatest relief came from the positive circulation of air through the entire house, a mechan-

ical circulation. Not only does it help to solve the problem of heating, but it gives us the opportunity to add other qualities than heat to the air.

In circulating air so as properly to distribute it we are literally pumping the air. We are not depending on the hot air being lighter in weight than the cold air, and so rising to the top of the stack. We are depending on a fan to build up enough pressure within the warm-air ducts to maintain the circulation. Many of these fans, like the one shown in Figure 1 for example, are centrifugal in action, quiet in operation, and handle large amounts of air at specified pressures. These fans are not of recent rapid development, but have been studied for years to meet various problems. They are highly developed.

Suppose the outlet from the fan casing of Figure 1 were closed up. Then suppose the fan were in operation. Each blade would seek to deliver air forces off its tip and also at a tangent to its rotation, as shown in Figure 2. These, combined, would give a resultant air force directed toward the fan housing. If this housing is closed at the outlet a static pressure of air will



MECHANICAL EQUIPMENT FOR 20-YEAR FINANCED HOUSES

be the only result. If the outlet is open to the duct-work, and if, of course, the fan housing is designed in the proper scroll, this static pressure will set up circulation and a certain velocity of air will be established in the ducts.

If we were to consider some part of the air-duct at a distance from the fan, it would be found that the pressure on the walls of the duct could be determined. This pressure, which is static pressure, is the air pressure within the duct at this point. But if we point a tube against the air current, as shown in Figure 3, we could register a velocity pressure in addition to a static pressure within this tube. If these two pressures, the total pressure and the static pressure, were opposed to each other in a U tube partly filled with water we could read the difference in velocity pressure alone. From this could easily be determined the amount of air being delivered.

It can be seen that in order to maintain this pressure within the ducts so as to provide a positive delivery of air, it is necessary to have a fan which is known to meet the requirements. The fans or blowers now sold to be used in residential units are of that order. Guaranteed capacity at specified speed is the offer of any reputable firm.

In Figure 4 is shown an air circulator which reverses the centrifugal idea. Or, to be more exact, the fan acts on the conoidal principle. This provision for drawing the air upward and spreading it gives two advantages. The heat of the fan motor is not drawn into the fan and directed at the person below. And whatever heat comes from the lighting element is diverted as well, making a more even room temperature.

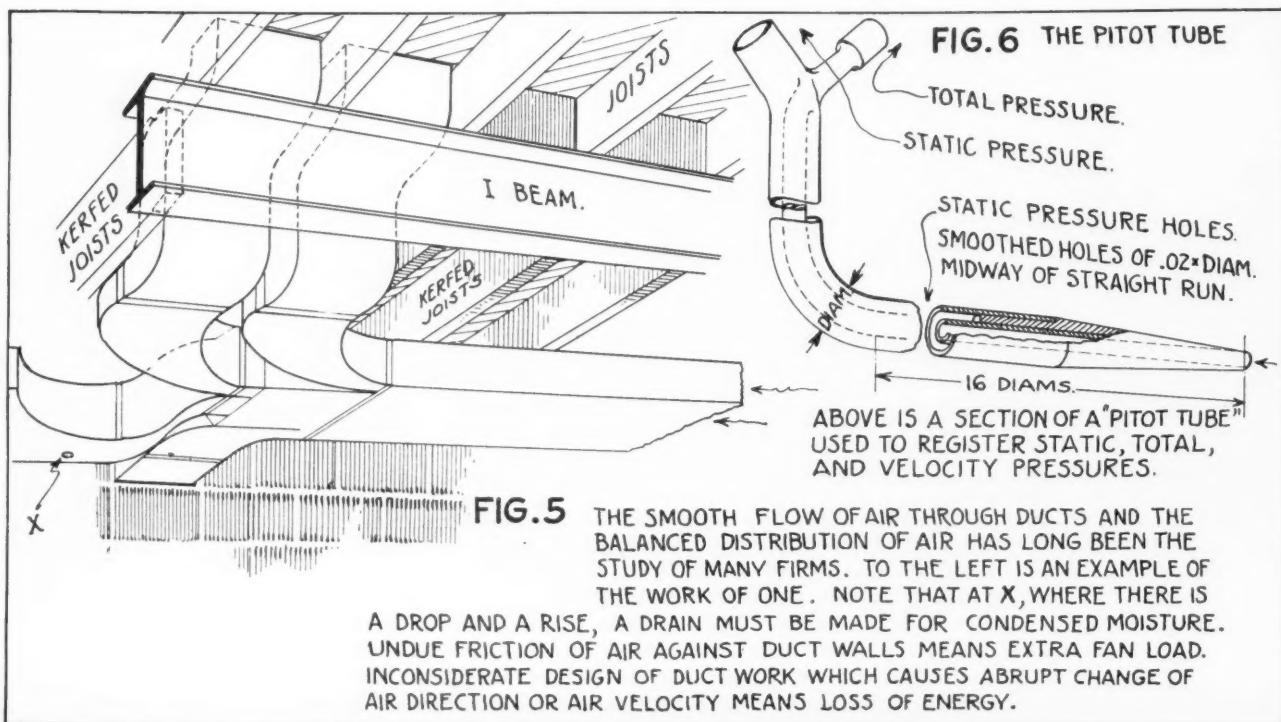
In Figures 5 and 6 I want to repeat somewhat on air circulation, and the necessity for substantial work throughout the heating plant. If rectangular ducts are used instead of round ducts, and if risers are taken off from main ducts as branches, there is a considerable

saving in heat due to the lessened duct area, and a considerable promotion of air flow through the lessening of air friction along the duct walls. With those who have made a study of duct-work great improvement has come through reduction of pressure losses at bends and elbows. Manufacturers are equipped to handle any situation in planning duct layouts. They know, and have known for some time, that efforts spent on lowering the fan load by improving the duct design will increase their business. The sketch shown in Figure 5 is part of a layout giving four branches from one main. The care in keeping to smooth curves in branching from the main and proportioning the cross-sections so as to deliver the right amount of air without resorting to dampering is an art in which manufacturers take pride.

Figure 6 is a broken sketch of a Pitot tube which is a device comprising the elements of Figure 3. With a Pitot tube any of the three pressures, static, velocity, or total, may be read. The determination of these pressures eliminates guesswork. Good duct design is not guesswork, and the firms installing good duct-work are as concerned in duct pressures as they are in any other part of the heating unit.

With the building of these future homes which are to have the endorsement and the encouragement of the Federal Housing Administration, the general contractor will surely be alive to the best practices. He will find a great encouragement in the improvements already practiced by the manufacturers in heating and circulating air. And he will have commendations from the owner instead of kicks, if he provides the house with the best.

Of all the elements of heating, cooling, or air conditioning, the proper circulation of air is the factor first to be considered. A home built under the Federal Housing Administration must have the best, and deserves the best.



MODERNIZATION

"which makes buildings of all kinds more cheerful, more livable and more salable"



RESCUED -

Earning Power
Restored by
Modernizing

DERELICTS -

Waiting for Resource-
ful Builders to Turn
Into Income Producers

HERE IS A TYPICAL STREET in Brooklyn, N. Y., in the famous Park Slope area showing the once fashionable brownstone front dwellings. No. 216 above has been converted into small, modern apartments, taking it out of the derelict class and making it into an income producer. The new brick front in English style is particularly striking, and of course attracts renters.

EACH FLOOR OF THE MODERNIZED building has been converted into two apartments, front and rear. New equipment, new interiors and an addition at the rear were required—a sizeable job for an enterprising builder. But just look at those others—and what a market they make!



Modernize Main Street

Suggestion for Special Drive
Under Federal Housing
Program to Stimulate Im-
provement of Business Prop-
erty

THE BUSINESS district of Long Beach, Calif., has been completely rebuilt in new style since the 'quake.

"MAIN STREET" in America comprises more than 1,500,000 stores, shops, garages, offices, places of business of every kind. It is probably the ugliest thoroughfare in the land. Step into any cross section of it, in almost any town, and it presents a sullen, nondescript panorama of architectural disharmony, its exterior unpainted, time-worn, often dilapidated, its interior equipment in large part inadequate and outdated. The street itself in many stretches is poorly lighted and its paving badly in need of repair. Nearly every creaking artery of it cries for remodeling, renovation, modernization.

The last report of the United States Census Bureau allocated the million and a half business places along "Main Street" approximately as follows:

food	482,000
automotive	257,000
restaurants	134,000
apparel	114,000
general stores	104,000
household	59,000
drug stores.....	58,000
general merchandise.....	55,000
lumber and building.....	53,000
second hand stores.....	15,000
miscellaneous retail outlets.....	210,000

The National Dry Goods Association estimates that the number of retail outlets in small towns throughout the country which need modernization is about 75 per cent. A relatively small number have thus far undertaken any substantial improvements since the depression set in. Business is better, but retail merchants are still uncertain about the recovery, and are still putting off improvements to their places.

The "Dry Goods Economist" gives a similar picture, estimating that nine out of ten retail stores need modernizing, that little or no money has been spent in the last five years for this purpose. They add that those stores which have modernized have invariably outdistanced competitors.

"Drug Topics" reports that nearly all the smaller drug stores in the land need improvements or remodeling of one kind or another.

All three of these authorities indicate that the loan facilities under the Federal Housing Act should prove a great boon to retail merchants, and say that the extent to which they can be made to take advantage of them depends on the sales pressure brought to bear upon them. The vast majority of retailers would be helped by loans of as little as \$2,000, the maximum now provided by the Act. However, a bill is now in Congress to raise the limit to \$50,000 and is expected to be enacted.

It is obvious that a great deal of business, affecting many branches of industry, and providing employment to a vast army of artisans would be set in motion if any appreciable percentage of the retail merchants of the country could be induced to make improvements now. From the standpoint of the merchants there is abundant evidence to show that repairs, improvements and up-to-date equipment invariably pay for themselves quickly in increased business. "Dry Goods Economist's" testimony to this effect has been quoted above.

Another aspect is that as much as 70 per cent of the cost of such modernization goes directly to labor and promptly flows back into the channels of retail trade.

A nationwide campaign to "Modernize Main Street," using the existing local committee structure to implement it is being urged by a prominent New York City business promotion organization, Batten, Barton, Durstine & Osborn. Such a campaign, it is thought, would dramatize the Federal Housing Administration's whole effort to stimulate business housing repair and improvement. "Renovation of business and industrial property has of course been part of the Federal Housing Administration's program from the beginning," states John Kelly, publicity director, "but emphasis up to this time has naturally been placed primarily on homes. This brand new drive would give the needed emphasis to the



business housing part of the FHA program. It would provide a springboard and an energizing slogan to start the thing going. With the national drive stemming from Washington, local campaigns should be launched in every community which has already established a housing program committee.

"Success would naturally depend upon the intensity of the drive and the emotional appeal that was put into it. For merchants there is the inducement of money for badly needed improvements. For the community in general, already conscious of the stimulating effect of building improvement on local business and employment, there would be the added appeal to civic pride—a better look-

NEW BUSINESS fronts are clean, crisp, dignified; built of impervious materials; no overhanging cornices; Schilling & Schilling are architects of this Long Beach, Calif., block.

ing town of which everyone can be proud, and which would be more inviting to passing tourists. Women, the principal patrons of "Main Street" could be moved to get behind it, demand better shops and shopping facilities. The local press should enthuse and the pulpit endorse. It is the kind of movement that civic organizations naturally support."



INTERIORS of shops and stores need expert restyling and rebuilding. To left is shown attractive shop of Thriftemart, Inc. on Wilshire Boul., Los Angeles; Morgan, Walls & Clement, Architects.

OUT-OF-DATE - - -



TO SAY that the kitchen above was out of date only half expresses it. It was inefficient, hard to keep clean, ugly. A Chicago builder saw the possibilities for modernizing and the results are shown at right. It is located in Chicago, has steel cabinets, a custom-built monel metal sink, electric dishwasher, built-in lighting fixtures, linoleum floor.

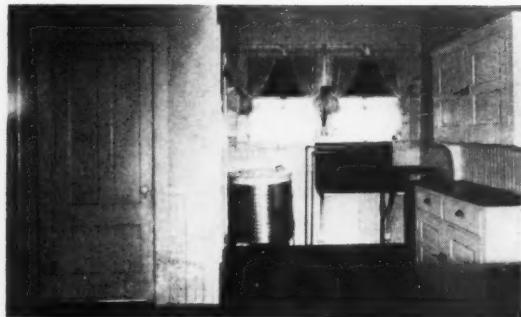
Modernizing Ideas—

Kitchens and



- - - EXPERTLY MODERNIZED

INEFFICIENT - - -



THE OLD KITCHEN ABOVE was inefficient and a space-waster. But Downes Lumber Co. of Walpole, Mass., saw in it an opportunity for a job. New cabinets were built in of wood. Ample storage space was provided, the kitchen well lighted. The work area provided by the monel metal sink and the cabinet top is very desirable. This is typical of kitchen modernizing being done for profit by enterprising builders and dealers.



- - - WELL PLANNED

Bath Rooms

- - - OBSOLETE



NEW MODERN FIXTURES, new tile work, a built-in tub feature the rebuilding of the old bathroom above. Just one of many jobs being done this spring assisted by FHA financing.



FHA Helps



MODERN IN EVERY DETAIL - - -

- - - UNSIGHTLY



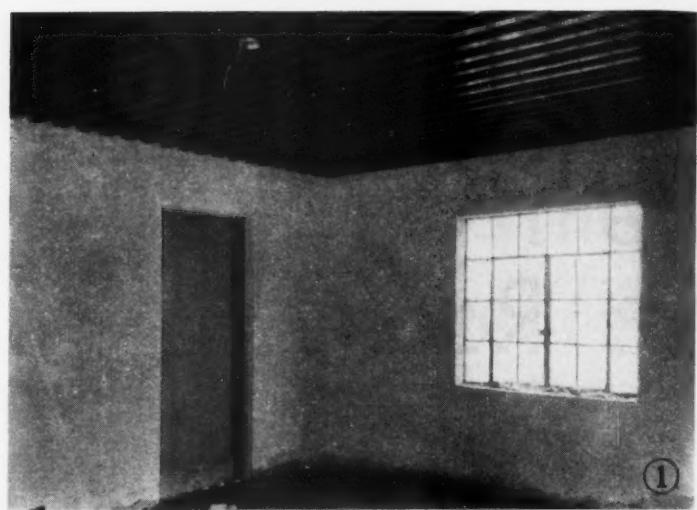
NOT ONLY UNSIGHTLY but unsanitary is the ancient kitchen shown above. In Melrose, Mass., however, a builder with vision and a knowledge of modernizing transformed it into the attractive home workshop shown at left. The built-in cabinets are well laid out and well constructed. The long monel metal sink top provides an excellent work space and is easy to keep clean.

Pittsburgh Home Builder Pioneers New Type Floor

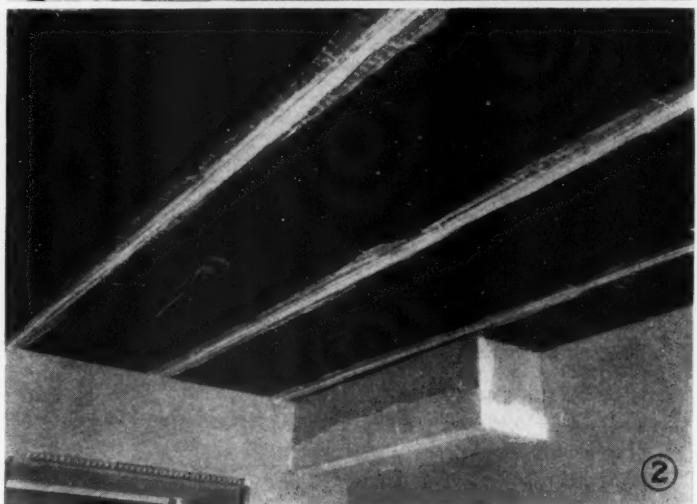
THE first use of the "Keystone Beam" steel floor in residential construction is in a house for Mr. P. C. McKenzie now nearing completion on Seneca Drive, Mt. Lebanon, Pa., a Pittsburgh suburb. It was designed by Henry C. Brockman, Pittsburgh architect, and built by Edward B. Bench, a local contractor known for good residential work. When interviewed "on the job" early in March, Mr. Bench was enthusiastic about this new type of floor construction and proud of his share in pioneering its use. "No trouble of any sort," he reported to an AMERICAN BUILDER representative. "The steel floor sections went in just as planned. Two men laid the first floor, about 1300 square feet, in eight hours, and when they came to the second floor they laid that in six hours. More people (prospects) have been out to see this job than any other I ever handled. I already have a couple of good jobs lined up to construct just as soon as I am through here."

The photographs accompanying show several interesting stages of the work on this house, and the drawings make clear the important details of construction. This is an eight-room house of local stone veneer. It is in a neighborhood where rigid, fire-resisting first floors for houses—and often second floors too—are quite common; their value is recognized. Reinforced concrete supported on "junior beams" has been favored by Mt. Lebanon home builders for several years. So the rigidity and fire safety of these new steel unit floors naturally appealed to both architect and builder, as well as to the home owner.

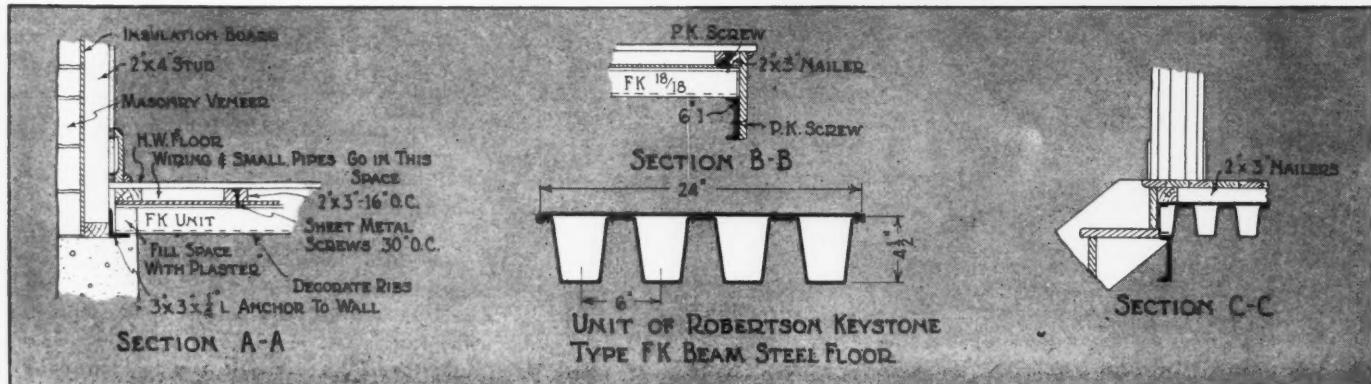
The Keystone Beam floor panel, as used in this Mt. Lebanon home, is a product of the H. H. Robertson Company, Pittsburgh, and was developed originally for office building floors and other large industrial construction. In that field it has been widely used and has demonstrated its ability to cut dead loads and reduce costs. In the form (FK-Type) specified for residential floors the units, 24 inches wide by any desired length, are shop-fabricated flat on one side and deeply corrugated on the other. A side interlocking joint holds the units tight together when laid. Either face may be up, depending on the desired floor and ceiling finish. Where a smooth ceiling below is wanted the flat side is placed down and the deep corrugations on the upper face are filled with concrete. If, however, a beamed ceiling effect is desired for the room below

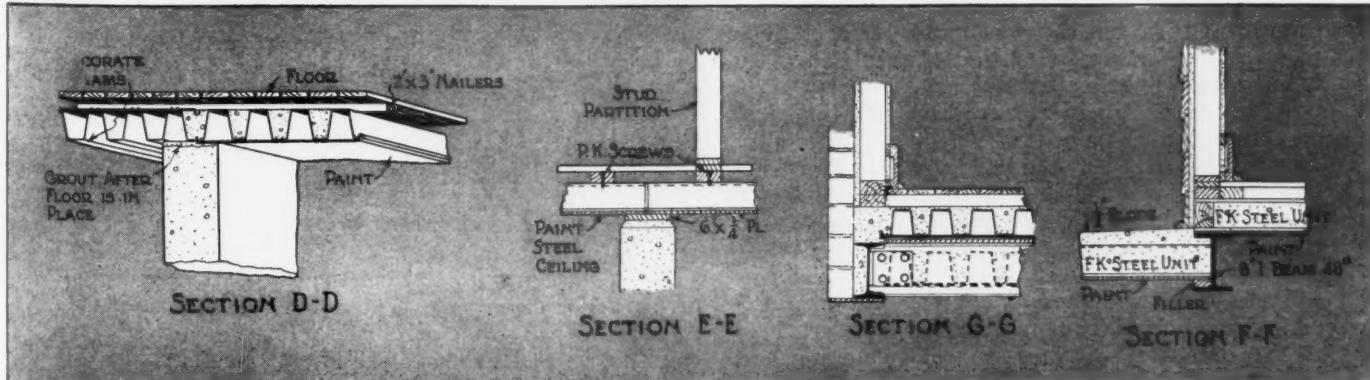
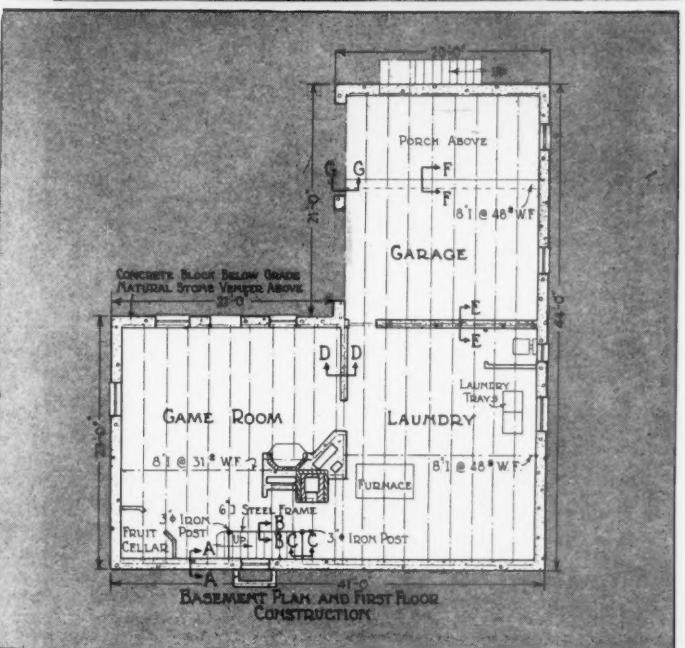
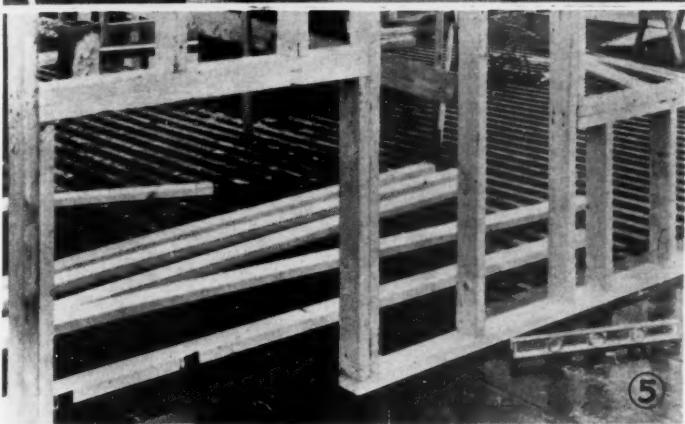
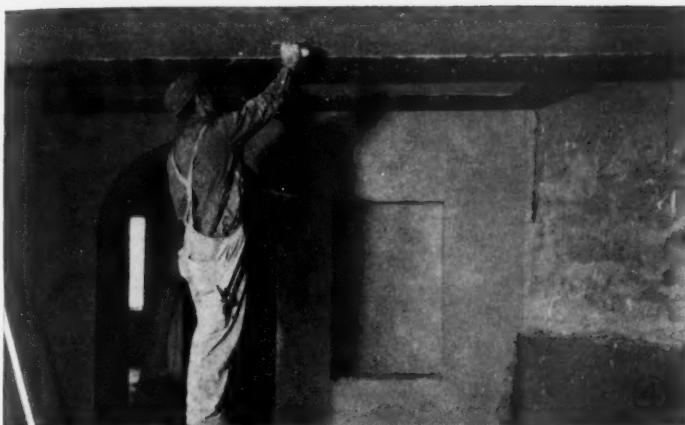


(1)



(2)





BUILDING history-making house of Paul C. McKenzie under construction in Mt. Lebanon (Pittsburgh); Henry C. Brockman, Architect; Edward B. Bench, building contractor. Typical floor plan showing layout of Robertson "Keystone Beam" steel floor units is diagramed and the detail sketches below make clear how the walls and floors are constructed.

the corrugated beam face is turned down. These 24 inch floor units as used in ordinary house floors are formed of 18 gauge steel and weigh $7\frac{1}{2}$ pounds per square foot of floor surface. Two men handle these units easily.

In residential construction, as in the McKenzie house, the basement walls are laid up of concrete and stone to the first floor line. The Keystone beam units are then laid on, becoming the working platform for the super-structure. Where stone or brick veneer is used, the studding at the outside walls is continuous from the foundation wall to the second floor ceiling. At the second floor line a $3\frac{1}{2} \times 3\frac{1}{2}$ angle is dapped into the studs and fastened with lag screws to correspond with the conventional ribbon plate used in frame house construction. This angle provides a seat for the second floor Keystone floor units.

Photo No. 1 shows the floor units with cells turned downward for beamed ceiling effect. The space between cells at the wall bearing is plastered. When completed the cells will be attractively decorated. The ceiling wiring is carried in the cells.

Photo No. 2 shows the result where the flat plate of the type FK flooring is turned downward. The joints between units have been filled with plaster of paris. The whole surface will later be painted or plastered, with entirely satisfactory results as shown in Photo No. 4. Here a scratch coat of plaster was applied to the flat steel, first to a thickness of $\frac{1}{8}$ inch and allowed to dry; then the second and final coat of plaster was applied to a thickness of about $\frac{1}{8}$ inch. The hewn wood beams shown in this view were fastened to the under side of the Keystone floor with long sheet metal screws. The plasterer Harry Rourke is shown in the photo.

Photo No. 5 makes clear how the interior partitions are mounted on the top of the flat top of the Keystone floor. The 2 x 4 sill is fastened down by drilling with an electric drill through the wood and through the flat plate of the floor. A sheet metal screw is driven through the wood and threads into the metal thus assuring a tight grip on the steel. The successful use of the sheet metal screw for fastening depends upon having a hole for its use drilled with a diameter equal to the diameter at the root of the thread. If so placed the thin metal of the Keystone plate acts as a nut on the thread of the sheet metal screw.



An Expert Specifies Hog House Details

H. A. Heimbeck, Barn Construction Specialist, Presents Profits Building for Corn-Belt Farms

ONE of the important structures I designed and built for the complete farm structures group near Hamlet, Ill., which I have been describing for the benefit of AMERICAN BUILDER readers is the gambrel roof double row hog house. The first requisites for success with hogs were considered in the design and construction of this hog house. The important factors, dryness, light and sunshine, warmth, fresh air, exercise and freedom from drafts were incorporated to insure proper housing. A substantial, moderate priced building adapted to these requirements and usable the year around was constructed.

The building is placed on a dry and well drained site, convenient to the farm court, corn crib and main barn (illustrated in recent issues of this publication) and located for desirable arrangement of concrete floors between the main barn and corn and grain storage. The long axis of the building is north and south so as to provide maximum light and sunshine.

The floor plan consists of a row of six pens, 6x8 feet in size, on either side of a central 4' feed and litter alley extending the full length of the building. The construction is simple frame double wall type with 2x6 for rafters and studding. One inch insulation between rafters and studding was used throughout.

Concrete was used in the construction of the foundation wall and floor for durability, cleaning and disinfecting. The barrel type gambrel roof was selected to match other buildings in the farm court and for best distribution of light from windows in the roof. The



FEED ALLEY in Hog House Showing Drain Troughs, Pen Gates and Roof Framing. The direct sunshine from the battery of 12 roof windows, 6 on each side, warms and sweetens the pens for early spring farrowing.

side walls are framed to clear the 3'0" hog door height, giving a low ceiling above floor for sunshine. All partitions and pen front gates are removable for sanitary convenience and to make building convertible into dif-

(Continued to page 92)

How to Use **MUELLER CLIMATOR**

**as a
Sales Lever**



Truly *modern* homes are easiest to sell, as you know—and who could ask stronger proof of modernity than *built-in Air Conditioning*?

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Write for details of the Complete Mueller Line* and of the Mueller-Milwaukee Finance Plan which offers the big selling assistance on modernizing jobs of One to Three Years to Pay—No Down Payment—No Mortgage or Red Tape. Here is the best hook-up with FHA you ever saw! Write us today.

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Harold Spitznagel, Architect, Sioux Falls, So.

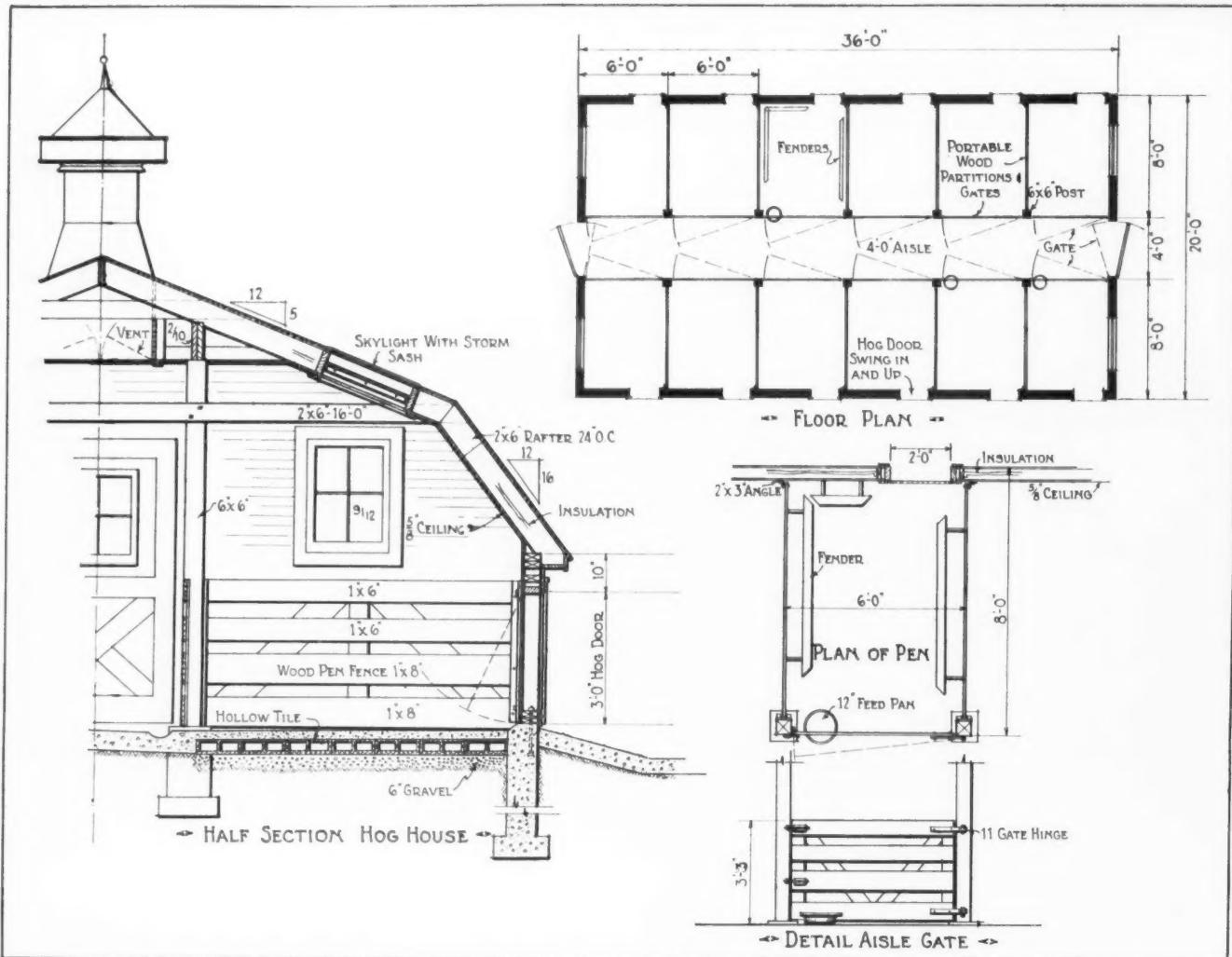


Mueller Climator II—matched fan, washer and filter units in 5 sizes—500 to 8,600 C.F.M. capacities—including special cooling types.



The Climator III combination—fan, air washer and air filter—provides a single, compact air conditioner for warm air and radiator heated homes, stores and the like.

MUELLER—MILWAUKEE



ABOVE—Construction details of hog house as designed by H. A. Heimbeck for construction near Hamlet, Ill.; note arrangement of roof windows and supports for gambrel roof.

PHOTO of Feed Pan under aisle partition in Model Hog House built at Hamlet, Ill.

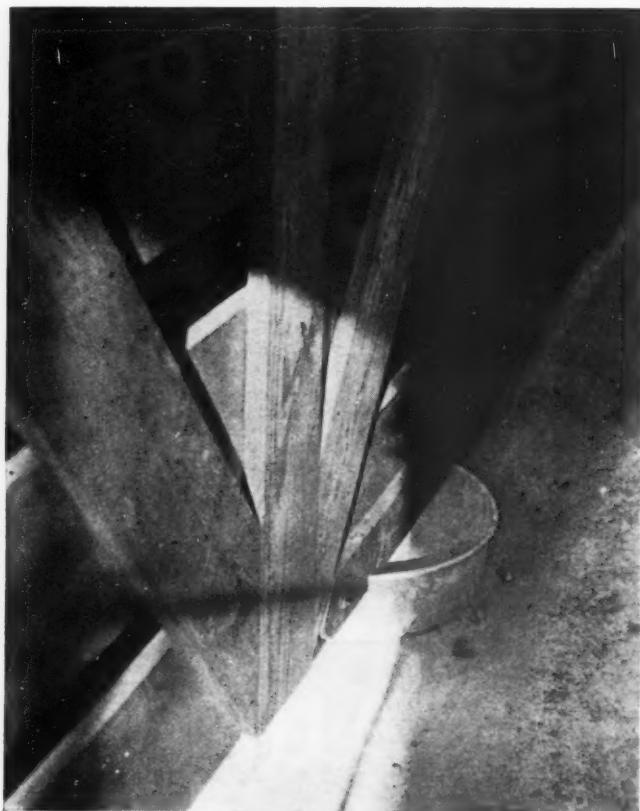
ferent arrangements for various types of hog purposes the year around. The hog doors open vertically and can be operated from the service alley. Fenders are provided for protection of the small pigs.

The floors in the pen sections are rough concrete laid over hollow tile on gravel fill and pitched to drain to troughs in service alley.

The roof windows are metal frames with wire glass and clear glass storm panels, located over each pen. These frames are placed for best advantage for sunlight during the farrowing months in this locality. Two cupolas are provided for ventilation.

Pen front gates and partitions are built up 1/8x1/6 No. 1 Y.P. Fenders are folding type with 2/4 rail. The metal feed pans are held in position by wood strip on pen gate and can be filled from aisle. Horizontal drop siding was used for outside sheathing. The entire interior is sealed with 5/8" ceiling.

The pen and gate partitions, walls and posts are treated fence height with creosote. Other interior parts are light color lead oil paint.



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Phone, wire or write our nearest office today for complete details. Here is your opportunity to cash in on the current interest in home repairs and remodeling which has been fostered by the government's Federal Housing Act. Barrett Roof customers can now buy new roofs the way they buy their automobiles and radios—on easy monthly instalments, from income instead of capital.



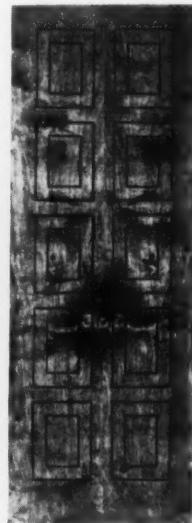
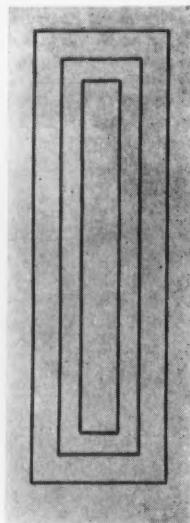
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Doors, panel work and table of grid wood construction.



Two modern flush door designs

New Type Doors Built with Grid Construction

USING a new type of grid construction perfected in France and widely used in ship building, the Paine Lumber Co. of Oshkosh, Wis., is producing a type of door that has many new qualities.

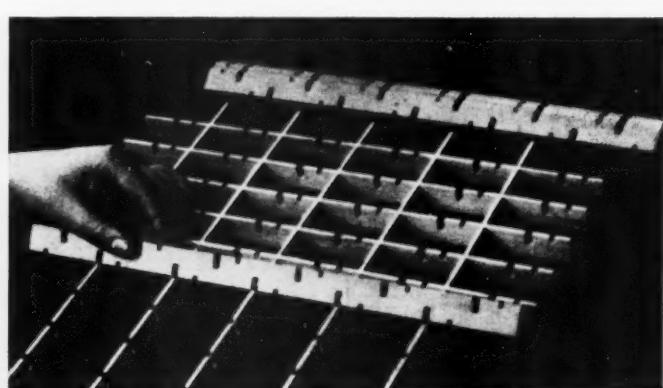
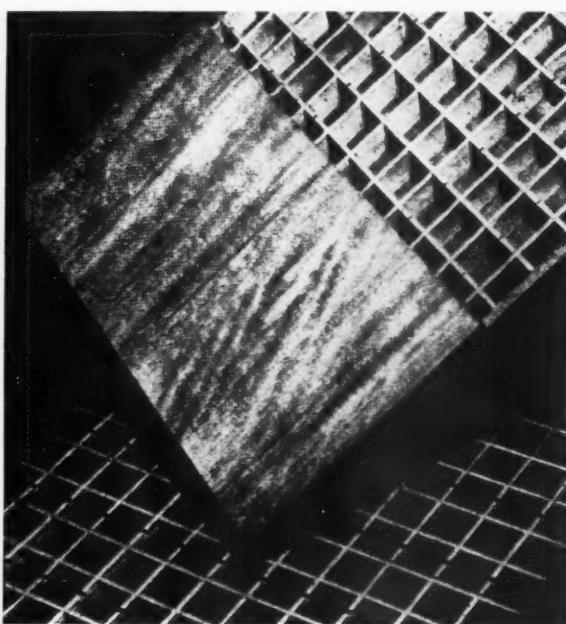
This type of construction is particularly applicable to heavy, flush type wood doors now so much in demand in connection with modern design. The doors are built up with wood strips, notched and interlocked to form a grid of the desired dimensions. Upon each side of this grid is glued a plywood, metal or marble veneer surface.

The door thus built up appears solid and substantial, yet is of astonishingly light weight. The interlocking grid or cellized frame provides great strength and rigidity. At the same time the use of grid work instead of a solid wood core permits circulation of air, thereby equalizing moisture content throughout the door and preventing warping. The grid construction corrects an elemental fault of wood, which is its swelling or shrinking as it absorbs or discharges moisture,

the resulting movement frequently developing warp.

The popularity of flush doors in modern architecture has led builders to consider this a desirable and quality feature. The new grid construction makes the heavy appearing flush doors so light as to require no extra hardware. It introduces economy in painting by reason of its continuous flat surface. Cost of material is also reduced, and also the cost of seasoning and kiln drying, so that this new type of door is marketed for little more than that of the ordinary two-panel or one panel type. The trade name "Rezo" has been given it, and this name is being used by the Paine Lumber Co. under license from the owners.

Rezo doors were first tried on the Ile de France, great transatlantic liner, when that ship was refitted about five years ago. Satisfactory results led to its adoption in the steamship Lafayette, which was completed in 1932. Grid construction was used for practically all the doors and partitions or bulkheads. In the dining salon a large wall surface of marble is supported by the Rezo frame. Experience with these doors in steamship and railroad construction has demonstrated their ability to stand strain and tendencies to swell and warp. The cellized structure offers a certain soundproof value which is important.



NEW FLUSH DOOR is built up of a lattice work of wood strips, notched and interlocked. Upon this core is glued the plywood surface producing a light, strong door that resists warping. The construction lends itself especially well to flush type doors. The construction is also suitable for tables, panel wall construction, etc. It is widely used in ship construction.



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But Reo Value goes even farther. Around this great truck engine

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Now for an investment of only a few dollars more than the lowest-priced trucks, users may benefit by Reo's 30-year reputation for longer life and lower operating costs. See this new sensationally low priced $1\frac{1}{2}$ ton Speedwagon at your nearest Reo dealer today.

Reo Speedwagons and Trucks range from $\frac{1}{2}$ to 4-6 tons including Tractor-Trailers and Buses. Prices from \$495 up, chassis f.o.b. Lansing, plus tax. Special equipment extra.

Prices subject to change without notice.

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\$535 1 $\frac{1}{2}$ -TON CHASSIS F. O. B. LANSING
TAX AND DUAL WHEELS EXTRA

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HERE is a proven sales plan that IS getting profitable modernization jobs for contractors now.

It sells your prospects something DEFINITE. It shows just how it can be done. Convincing, interest-arousing literature with this simple effective plan, is supplied by the Weatherbest Corporation without charge.

Nationally advertised WEATHERBEST Stained Shingles are proven and popular. They offer the most practical, economical and beautiful means of transforming old homes into new at the cost of a good paint job. And frequently WEATHERBEST overcoating jobs lead to extensive repairs or changes which build bigger jobs for you.

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Please send your New Selling Plan with Complete Set of Literature, including the book MODERN MIRACLES without charge.

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NEW EQUIPMENT and power tools

MUCH new equipment is needed today to handle the revival of building getting under way. A large part of the equipment in the hands of contractors is outmoded and out of date. Furthermore, during the depression manufacturers have perfected a large number of new items of equipment for new conditions that are vitally important to the contractor today.

Some of the new materials coming into use call for special tools that never have been part of the builder's kit. While it is impossible, in this article, to summarize all the changes in building equipment, the following are some typical cases of items that are expected to play an important part in reducing costs and speeding up work in the 1935 building program.

FIBRE BOARD CUTTER—This is a new device of special importance in cutting grooves, bevels, shiplap joints and various patterns in fibre board and panel materials. Its cuts off or slits fibre board quickly and easily, greatly increases the ease with which interior decoration in this material can be handled.—Stanley Tools, New Britain, Conn.

HOME BUILDER'S SAW RIG—A new compact combination woodworker with rip and cross-cut saws, jointer, band saw, borer and mortiser. Made by the C.H. & E. Manufacturing Co. of Milwaukee, this machine can be operated with either gasoline engine or electric motor. It handles large volume, does precision work and is very light in weight.

WEATHERSTRIP GROOVER—This machine is an electric groover that plows grooves faster and better than can be done by hand. It is made by the R. L. Carter Division of The Stanley Works, New Britain, Conn., who also make a large number of fast new power tools for contractors, including the Carter Kerfing machine, the Carter power plan, electric door sets, routers, and other devices for speeding up builder operations.

ELECTRIC HAND SAWS—Six powerful improved electric hand saws are offered by Skilsaw, Inc., Chicago. Each is designed for special efficiency for the builder. One of the most popular is the Model W with 6-inch blade weighing 8 pounds and retailing under fifty dollars. Although light in weight, it is a fast operator, with a speed of 3400 R.P.M., and a cutting capacity of 1½ inches. The Model R is a heavy duty tool with 12-inch blade for use in heavy work.

FAST ELECTRIC HAMMER—Stone, concrete, plaster, brick or any other material may be speedily cut with this new electric hammer which weighs only 26 pounds, but delivers 1800 powerful blows per minute. This machine is very important in modernizing and repair work, and is a time and money saver. It is made by the Speedway Manufacturing Co., Cicero, Ill., who also make electric power saws, a portable workshop and heavy duty hammers for all purposes.

SCAFFOLD BRACKETS—What has happened to all those brackets we used to have? A line of safe steel scaffold brackets that are quickly erected and easily taken down and low in cost is made by the Reliable Jack Co., Dayton, Ohio.

LEVEL AND TRANSIT—The 1935 builder's level and transit made by Geier & Bluhm, Inc., at Troy, N. Y., provides a much needed and mistake-saving instrument at very low cost. It is indispensable to accurate contracting work.

COMPLETE PLANING MILL—The Parks Woodworking Machine Co. of Cincinnati, Ohio, has brought out a new planing mill special which is a complete modern shop in itself. The large working surface makes it possible to handle big jobs easily. In addition to the cast iron double table rip and crosscut saw, it includes a 22-inch band saw, swing cut-off saw, 12-inch jointer, tenoner, upright hollow chisel mortiser and borer, reversible spindle shaper and 18-inch sanding disc. Each unit is independently operated but all are compactly arranged as part of the one efficient machine available at reasonable cost.



This 1 to 1½-ton Model C-20 International Truck is owned by the Home Lumber & Supply Co., Rockford, Ill.

Transportation AT LOW COST

ECONOMY is the sum and substance of truck ownership. You may do without economy in a car but the truck is a stern business proposition. It has always been so—but today more than ever. For more than thirty years International has sought one objective—transportation at the lowest possible cost for the man with loads to haul. That is the root and heart of International Truck success.

That 30-year endeavor bears sound fruit today in the new Internationals. Their unfailing day-in and day-out service will give you a new idea of

dependable truck performance. And every mile they run and every load they haul will be a revelation to you in lower figures on your cost sheets.

The more minutely you examine their advanced design and construction the easier you will understand their stamina and performance. And the more you talk to owners the more impressed you will be with the low-cost hauling Internationals deliver. Sizes range from ½-ton to 10-ton. Sold and serviced through 230 Company-owned branches, and dealers everywhere.

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Chicago, Illinois

INTERNATIONAL TRUCKS

HANDLES SO EASILY-- and what a job it does!



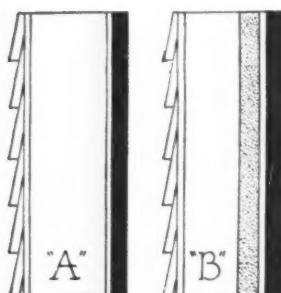
So simple you can use any workman to apply Capitol Rock Wool Batting. Readily cuts for odd spaces.



Cuts readily to odd-shaped spaces. Resilient and flexible and a permanent installation.

YOU want an Insulation job you can boast about. "Come-backs" are expensive both in cash and in reputation. The buyer of an insulated house expects the comforts and economies of full wall-thick insulation and feels disappointed, even cheated, with less.

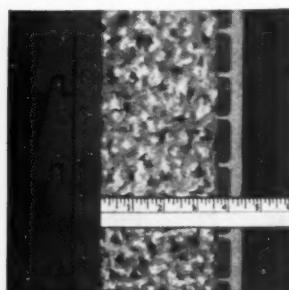
Rock Wool is admittedly the most efficient insulation known to science. In Winter, CAPITOL ROCK WOOL INSULATION means a saving of 20% to 35%—permitting a smaller heating installation. In Summer, a house 8° to 15° cooler!



Hollow studding space—no insulation value.
1/2" or 1" Board type — inadequate insulation.

CAPITOL ROCK WOOL INSULATIONS

Capitol Rock Wool is so easily and quickly handled that it seldom costs more than inferior materials. Manufactured in 15x23 in. Bats, it fits between standard 2x4 studding spaced 16 in. or 24 in. centers. No wastage. Every piece is usable and you can order to the approximate square footage desired. Delivered in cartons. Eliminates the hazard of hand-packing loose or fill types. Insures uniform job. Use the coupon below for samples and more information.



Wall-thick Capitol Rock Wool Bats completely fill 3-5/8" studding space. No fire can rage between these walls! Heat or cold is repelled.

MAIL THIS COUPON TODAY

THE STANDARD LIME & STONE CO., Baltimore, Maryland (Est. 1888)

Please send us without obligation:

Samples of Wall-thick Bat Detailed information, costs, etc.

Name _____

Address _____

City & State _____

Check if also interested in Blowing Method for insulating existing houses.



HIGH PRODUCTION SANDER—This 180-pound machine of the American Floor Surfacing Machine Co., Toledo, Ohio, is a light, fast and powerful machine which can be efficiently handled by one man. It weighs 180 pounds, and is big enough for large production work. Yet it is not so unwieldy as to require a truck.

TRAILER MIXER—The improved 3½-S trailer mixer of the Kwik-Mix Concrete Mixer Co., Port Washington, Wis., has a special drum designed to produce the best possible mixed concrete. It is light in weight, has a skip shaker, automatic water tank, spring mounting. It is easy to handle.

BUILDER'S TRANSIT-LEVEL—Objections to a convertible level are eliminated by this new improved transit-level made by Warren-Knight Co., Philadelphia. In this machine it is not necessary to take the telescope out of the wyes for line and grade work. The instrument is well designed, efficient and an important part of the home builder's equipment today.

LIGHT WEIGHT SANDER—A sanding drum 7 inches long having small diameter and driven at high speed is the important feature of the Speed-O-Lite sander made by the Lincoln-Schlueter Co., Chicago. It has a constant duty motor, efficient dust collector, is fast in operation, strongly built.

BRICK MACHINE—Improved equipment of the W. E. Dunn Mfg. Co., Holland, Mich., enables contractors to get into brick making in a profitable way. Machines make concrete brick and tile in attractive colors which find wide use in the building field.

STONE SAWS—The cost of handling and cutting stone is greatly reduced by the use of a portable electric stone saw. The Stanley Works, New Britain, Conn., produces a machine with high speed abrasive wheels, which has a capacity of 3 to 4 inches, cuts rapidly and smoothly.

LOW COST MIXER—The Jaeger Machine Co., Columbus, O., has a handy trailer mixer which is a fast, low cost 3½ sack machine. Compact in construction, it turns out a large volume of work and yet is inexpensive to operate, easy to handle.

CUTTING MACHINES—A line of modern machines for cutting wood, metal and stone in a most efficient manner is produced by the DeWalt Products Corp., Lancaster, Pa. The Wonder Worker has long been known in the building field, and is fully up to date. Machines are mounted on sturdy steel frames, are fast, strong, efficient.

SPACE-SAVING WOODWORKER—The American Saw Mill Machinery Co., Hackettstown, N.J., is making a time and space saving machine called the 20th Century Woodworker which does 18 different everyday jobs, and yet is a compact, low priced machine. Included are cross-cut saw, rip saw, jointer, shaper and router.

HANDY BEVELER—One of the handy new tools is the Bevil-Devil made by the Kimball Manufacturing Co., Royal Oak, Mich., which is used for beveling, slicing and grooving all insulation boards. Reasonably low in price, the machine cuts a clean, smooth edge, and produces any kind of design in wall board.

RENTAL SANDERS—Dreadnaught Sanders, Muskegon, Mich., are advertising unusual profits through sander rentals. Machines are fast, light in weight, easy to handle.

Allwood Specifications

(Continued from page 54)

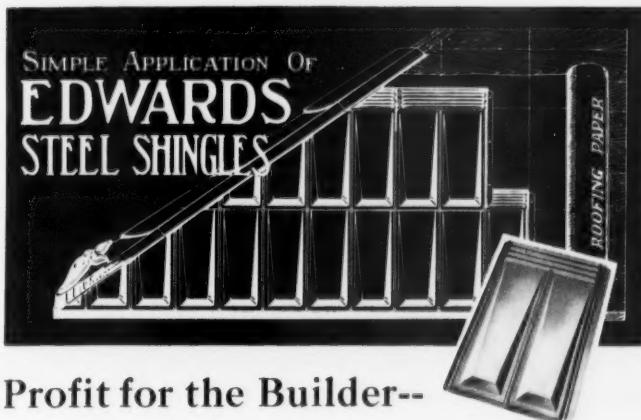
trim. Picture moulding to be 7/8"x1 1/2" for all bedrooms; living room and dining room 1 1/8"x3" cove.

STAIRS—Y.P. treads, 1 1/4" thick, risers 7/8", 1 1/4" Y.P. stringers. 1st to 2nd floor to have 1 1/8" African Mahogany treads and W.P. 7/8" risers, 1 1/4" stringers. Treads to have rounded nosing and cove underneath, well blocked, housed, glued and wedged. Riser and treads housed into end string glued and wedged. Platform finished with oak flooring. Colonial balusters, handrail and newel post of birch.

TILE WORK—1 part cement, 2 parts clean sand. Pardee Tile Co. Bathroom walls 4' high with 4"x4" glazed tile, selected colors; moulded cap, base, in black. Shower stall tile from floor to ceiling. Ceramic tile on floor. No defective, crazed or cracked tile to be used.

Bath fixtures: 3 towel bars, 1 recessed paper holder, 3 soap cups, 1 toothbrush and glass holder.

SHOWER DOOR AND CABINET—Chromium plated framed
(Continued to page 118)

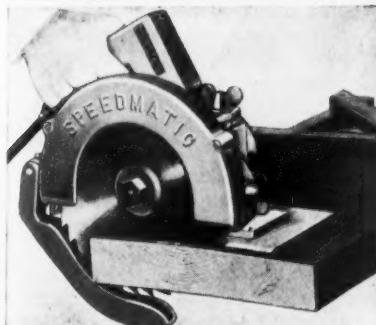


Profit for the Builder-- Economy for the Owner

PROPERTY owners learned during the past few seasons that Edwards Steel Shingles give lasting protection. Droughts, extreme summer heat, terrific rain and wind storms, heavy snows have no damaging effect. Non-porous, steel shingles can't dry out, rot, curl up, bulge or pull loose. Absolutely fire and lightning proof, too. The unique twin pattern of Edwards Roman Shingles, shown above, gives a tile effect and is easy to match at hips and valleys. Cost no more than ordinary roofing materials.

Write for Shingle catalog No. 72

THE EDWARDS MANUFACTURING CO.
542-562 Eggleston Ave., Cincinnati, Ohio
*World's leading manufacturers of Metal Roofings,
Sidings, Ceilings and Sheet Metal Building Materials.*



Speedmatic Saw

The dependable saw for cutting and dadoing wood and other materials. Tilts to 45° and adjusts for depth. Write today for complete details.

PORTER-CABLE MACH. CO., 1721-4 N. Salina, Syracuse, N. Y.

Dear Jim—
Here's a picture
of my new
Porter-Cable saw—
it's the fastest,
easiest and most
dependable saw I've
ever used. It only
cost me \$75.00, and
has already saved
me twice that much.
You ought to get one.
Joe

MAKE GLAZED CONCRETE GARDEN POTTERY

Without Molds, Power or Costly Tools

National-Lithoglaze Pottery System including exclusive Patent Protection NOW \$28.50 ONLY

New, perfected, low cost method makes glazed finish concrete garden pottery without use of molds, power or costly equipment. No experience needed. Use only sand and cement. Complete pottery plants making more than 2,500 different designs birdbaths, vases, jars, pedestals, etc. cost less than price of one mold by old methods. Patent protection given operators. A money making side line or full time business for concrete workers anywhere.

SEND 10c TODAY
for illustrated booklet, color plate and complete information.

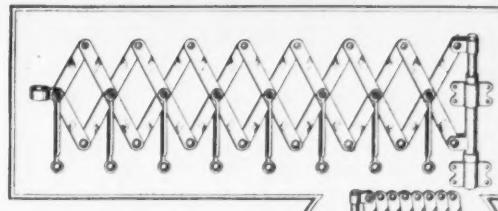
NATIONAL POTTERIES COMPANY

424 Second Ave. South

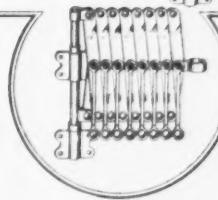
Room 25

Minneapolis, Minn.

HOOD



More Space From Smaller Closets



The Hood Extension Garment Hanger will aid you in increasing the closet space in the homes you build and modernize.

It only requires 8 inches of space. Can be fastened to the wall or door. Strongly built—will not sag or warp. Made in three sizes and two finishes, bronze or nickel. Capacity from 12 to 32 garments.

Make the closets you build modern and up to date by installing Hood Extension Garment Hangers.

BUILDERS

If your dealer does not carry the Hood write us for complete information and price list.

ATTENTION MANUFACTURERS

We want a reputable national manufacturer with established selling organization to take over the manufacture and sale of this nationally known article—on a royalty basis—this is a real opportunity for a live company.

CARLOADS ALREADY SOLD—INQUIRIES ARE BEING RECEIVED

Write us today

**EXTENSION GARMENT
HANGER COMPANY**
DALLAS **TEXAS**

Andersen

NOW GIVES YOU—

*in addition to the famous
Andersen Master Frame
with Lock Sill Joint*

THREE COMPLETE WINDOW UNITS of Modern Design and Improved Mechanical Construction

Andersen CASEMENT WINDOW combines wood and aluminum in modern narrow line design. Includes factory fitted sash, screen and removable double glazing, and complete hardware. Effectively weather-stripped and exceptionally *leak proof* and weather tight. Especially suited to the requirement of air conditioning and gas or electric heat.

Andersen NARROLINE Double Hung Window combines modern narrow mullions and trim with time tested counterbalancing to insure dependable and trouble-free sash operation.

Andersen BASEMENT WINDOW. A complete wood unit, including frame, sash, screen, hardware—all assembled and ready to use.

Approved and specified by hundreds of Architects and Builders. Enthusiastically endorsed by Satisfied Home Owners from Coast to Coast.

Ask your lumber and millwork dealer or write for illustrated folders and a demonstration from actual experience.



ANDERSEN FRAME CORPORATION
Bayport, Minnesota

<input type="checkbox"/> Andersen Casement Window	<input type="checkbox"/> Andersen Master Frames
<input type="checkbox"/> Andersen Narroline Window	<input type="checkbox"/> Andersen Master Weatherstrip
<input type="checkbox"/> Andersen Basement Window	

AB-4

Name _____

Address _____

City _____ State _____

NEWS OF THE MONTH

Building Activities

New FHA Plan Speeds Loans

A FAR-REACHING change in FHA mortgage loan procedure has been announced by Administrator Moffett, which will greatly speed up new home loans.

Under this plan any FHA office will make an appraisal and pass on the qualifications of a mortgage loan *before* the borrower goes to a bank or other financial institution.

If a local bank or financial institution refuses to make the loan, the FHA office will then make efforts to find a lender.

Contractors and dealers will be saved much fruitless time at banks and other institutions by this new procedure. They will not waste their own time and that of banks making negotiations for loans that would not be approved by FHA.

Under this plan, contractors or dealers can go to a prospective home owner, get an application signed up and take it to the nearest FHA office for examination, appraisal and approval. If the loan is approved by the FHA office, a letter will be written to the contractor or dealer certifying that they will issue a commitment to insure if a loan can be arranged with the local bank. Then the contractor can go to the bank with this letter and his loan application with a good chance of having the loan approved if the bank is anxious to do this kind of business.

Where such a loan has been approved in advance by FHA, but the local bank or financial institutions are not willing to co-operate, the contractor can take his application back to the FHA office, which will then endeavor to find someone who will make the loan. Upon failure to secure financing locally, it is indicated that the application will be turned over to the state FHA director who will make every effort to secure the financing, and if he fails the application may be taken direct to Washington where means of financing will be assured.

This new ruling will greatly speed up loaning activity and will undoubtedly put loans through much faster. In effect, it will enroll the thousands of FHA workers in the job of helping prospective borrowers find prospective lenders.

Home Building Up 99.3%

NEW residential construction and modernization work continued to make substantial gain during February, as shown in reports of the U. S. Bureau of Labor Statistics to the Federal Housing Administration. Both types of building activity are being stimulated by the Better Housing Program.

Reports from the 772 largest cities showed \$9,891,707 of new residential construction, a gain of 99.3 per cent over February, 1934. Additions, alterations and repairs totaled \$12,954,813, a gain of 30.4 per cent.

Although February is a short month and usually shows a decrease in comparison with January, reports from these cities showed a gain last month of 9.1 per cent over January in new residential construction and of 6.4 per cent in modernization work.

Every section of the United States shared in the upward movement of modernization work last month. In comparison



"RAINBOW FLEET" of Certain-Tee Products Corp. which has been touring the country creating enthusiasm for FHA

**THE TOUGHEST POWER SAW
IN THE WORLD
ON THE TOUGHEST JOB
IN THE WORLD**

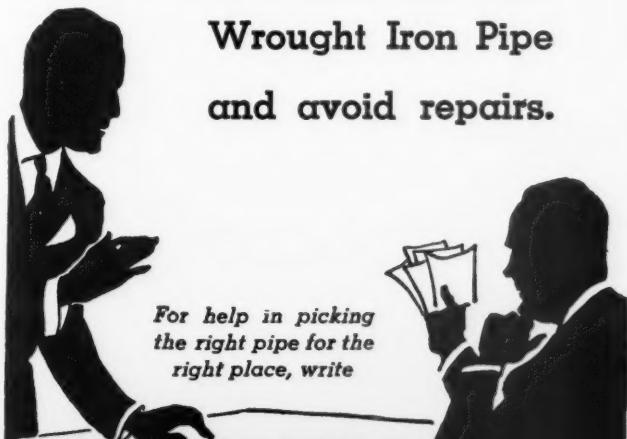
BOULDER DAM, greatest of all the works of man—the job that was impossible—yet the job that, despite unbelievable obstacles, is being completed two years ahead of time! Naturally it was Skilsaw—powerful, efficient, dependable that was chosen for the giant task. And naturally YOU will want Skilsaw to make your tough jobs easy. Six powerful models. SEND FOR COMPLETE NEW CATALOG.

SKILSAW, INC., 3314 Elston Ave., Chicago

SKILSAW
PORTABLE ELECTRIC HANDSAW



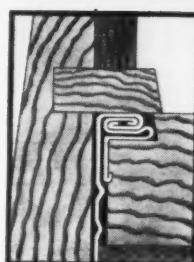
Tearing up floors or knocking out walls to make pipe repairs is expensive. Install Reading Genuine Puddled Wrought Iron Pipe and avoid repairs.



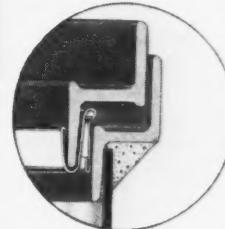
READING IRON COMPANY
PHILADELPHIA

SCIENCE AND INVENTION HAVE NEVER FOUND A SATISFACTORY SUBSTITUTE FOR GENUINE PUDDLED WROUGHT IRON

New PROTEX
METAL WEATHERSTRIPS



NEW SURETY STRIPS
Our latest development proves far superior to ordinary weatherstripping—note the patented interlocking features—the efficiency of this strip has not been equalled.



THERE'S A PROTEX STRIP FOR EVERY TYPE SASH OR DOOR

All Protex strips are made of the best materials. Rust proof—easy to install and guaranteed a lifetime. Try Protex on your next job; you will be satisfied.

PROTEX STRIPS for STEEL SASH

Steel casements can now be airtight, watertight and rattle-proof with this new easily applied patented flexible cushioned bronze.

PROTEX RIB STRIPS FOR DOUBLE HUNG SASH. An economical standard equipment universally accepted for its power effectiveness.



Protex equipments are laboratory tested. Charts and other interesting data may be procured on request.

Kindred lines at your disposal

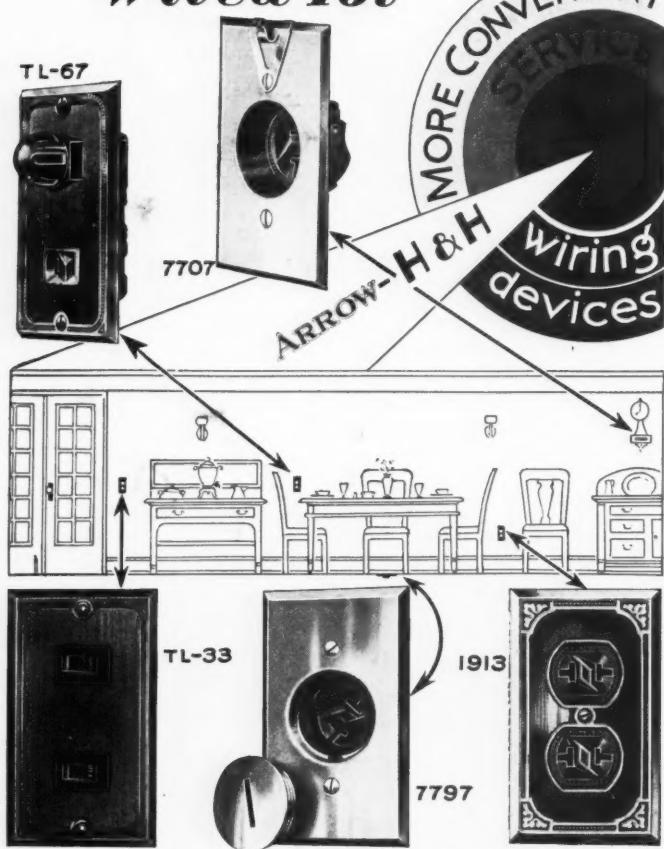
Metal Screens, Thresholds, Edgings, Stair nosing, Bindings, Caulking Compound

Several franchises are available. Write for complete details.

PROTEX WEATHERSTRIP MFG. CO.
2306-8 West 69th Street,
Chicago, Ill.



DINING Room wired for



2-Switch Combination No. TL-33 controls fixture lights—one lever for overhead, the other for bracket lights—from either of two doorways. Floor Outlet No. 7797 provides for plugging in electric toaster or coffee percolator on dining table. Duplex Convenience Outlet No. 1913 takes the attachment plugs of electric cleaner and other appliance. Warning Light and Receptacle Combination No. TL-67 provides outlet for coffee percolator or chafing dish used on serving table. Warning light shows red while current is ON... Electric Clock Hanger Outlet No. 7707 provides mechanical support for the clock and electrical connection. The Coupon below brings you illustrated data-sheets on all of the above numbers you may indicate.

**THE ARROW-HART & HEGEMAN ELECTRIC CO.
HARTFORD, CONNECTICUT, U.S.A.**

**COUPON: To Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
SEND ME illustrated data-sheets on the following numbers:**

Name and address _____

My Electrical Contractor is _____

with February, 1934, figures of the Bureau of Labor Statistics for last month showed percentage gains as follows: Mountain states, 88.7; New England, 68.3; east south central, 37.1; south Atlantic, 32; middle Atlantic, 27.2; west south central, 26.5; Pacific, 23.5; east north central, 18.3, and west north central, 15.1.

Each of the twenty-two cities showing additions, alterations and repairs totaling more than \$100,000 reported substantial gains over the same month last year, with the exception of Washington and Cleveland. They are as follows:

	1935	1934
New York	\$2,555,646	\$1,743,201
Los Angeles	485,358	279,292
Hartford, Conn.	309,987	84,169
Boston	248,569	223,824
Detroit	244,676	168,484
Chicago	228,824	155,595
Washington	216,470	265,668
San Francisco	175,620	185,079
Albany	191,533	71,450
Baltimore	190,123	141,213
Pueblo, Colo.	154,669	3,149
Houston, Tex.	153,730	55,010
Oakland, Calif.	148,166	79,410
Pittsburgh	145,808	58,736
Philadelphia	139,001	138,706
Augusta, Ga.	129,696	14,546
Newport, R. I.	124,703	2,100
Memphis	122,850	42,900
Cleveland	114,425	233,550
Denver	108,031	94,033
Portland, Ore.	105,655	104,130
Birmingham, Ala.	105,420	69,621

9,500 Enter G.E. Contest

MORE than 9,500 architects and builders submitted designs in the General Electric Home Competition which closed March 15. Judges were to make their decision March 23 and a number of the prize winning plans will be published in the May AMERICAN BUILDER.

According to Kenneth K. Stowell, former editor of the Architectural Forum and professional adviser of the competition, the drawings show great advance in time saving, labor saving equipment. Designs are modern in nature, show numerous new ideas in home design and arrangement.

House Bill Extends HOLC

THE House of Representatives on March 12 passed the bill to increase the loaning power of the Home Owners' Loan Corporation by \$1,750,000,000 by increasing the amount of bonds it is authorized to issue to \$4,750,000,000. The bill also amends the Housing Act to authorize the FHA to guarantee loans for the modernization of industrial property to the amount of \$50,000 on the same basis that is applied to home modernization. In addition, the House adopted an amendment to the Housing Act extending it to April 1, 1936, instead of January 1, the period for the operation of Title I of the Housing Act.

Enlarge Outlet for FHA Loans

AN important new market for FHA insured mortgages will be opened as a result of the recent liberalization of rules and regulations governing the mutual mortgage insurance plan of the National Housing Act.

Under the revised regulations, mortgage companies with capital of \$250,000 or more, and trustees acting in a fiduciary capacity, are eligible as mortgagees with authority to obtain insured home mortgages.

**HARRY R.
SHEDD**, new di-
rector of sales of
the Upson Co.,
Lockport, N. Y.





LANCASTER BRICK & TILE CO.
Manufacturers of
CONCRETE BUILDING UNITS
South Main Street
LANCASTER, SOUTH CAROLINA

W. E. Dunn Mfg. Co.
Holland, Michigan.

Gentlemen:
In accordance with your request, might state that I was very well satisfied with your contracting business until the year 1930 at which time I began to lose money continually, until it became necessary for me to find a new source of income. After viewing your ad in the "American Builder" and receiving your literature, I was interested in your brick making machinery and equipment in my being absolutely sold. This inspection resulted in my being absolutely sold.

As I was not financially able to purchase the plant, after coming with their ready cooperation, I put the few present business men after coming first brick sold was for materials. After two weeks we were making DUNBRIK. The filling orders as rapidly as possible, we have arranged for additional equipment to run our plant here on an extra shift.

Inasmuch as our DUNBRIK have been used in all of the buildings we feel we have been very successful, that there is an ordinary brick plant was that we are selling DUNBRIK. The brick or DUNBRIK bought from us and I might add that all the men who are associated with me have told me that they appreciated the fact that I gave them an opportunity to share in our company, and we are all highly pleased with what the DUNBRIK machinery is doing for us. If you desire further information, do not hesitate to write me.

Yours truly,
J. W. Belk

Tom Belk's PROGRESS

Tom Belk tells how DUNBRIK made money for him—A good investment for his associates—A going industry for his town—Cut building costs for his community and built a business for himself. Read his letter—Then send for "4 Keys to Success" and learn how DUNBRIK can do as much for you in your territory.



W. E. DUNN MFG. CO., 450 W. 24th ST., HOLLAND, MICH.

AMERICAN STEEL SHEETS FOR ALL KNOWN USES

KEYSTONE Copper Steel
AMERICAN
Sheet and Tin Plate Company PITTSBURGH

KEYSTONE Copper Steel Sheets
Excel in the Building Field

Use sheets of recognized reputation and value. For roofing, siding, gutters, spouting, air conditioning systems, and general sheet metal work—Keystone Copper Steel gives maximum rust resistance.

Insist upon AMERICAN Black Sheets, Keystone Rust Resisting Copper Steel Sheets, Apollo Best Bloom Galvanized Sheets, Galvannealed Sheets, Heavy-Coated Galvanized Sheets, Formed Roofing and Siding Products, Terne Plates, etc. Write for information.

This Company also manufactures U.S.S. STAINLESS and Heat Resisting Steel Sheets and Light Plates for all uses to which these products are adapted.

AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh, Pa.
SUBSIDIARY of UNITED STATES STEEL CORPORATION



**Be a Contractor—
Make Big Money
NOW**

Uncle Sam will help you make money if you are ready.

Billions of dollars are being used to make jobs and the Home Modernization Program offers the biggest chance to make money carpenters have ever known. Are YOU Ready? Can you remodel from start to finish—do you know the tricks of estimating, laying out, etc.? Here's your chance to get these facts—quickly—easily, without study or work—just put your finger on what you want to know instantly.

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2400 Pages, hundreds of diagrams, estimate sheets, etc., instructions on blueprint reading, estimating, framing, construction, architectural drawing, plumbing, heating, etc., make these books invaluable to any carpenter who wants to cash in NOW on today's opportunities. This may be the chance of a lifetime. Jiffy Index makes these facts available in a few seconds. Remember these five big books all shipped to You FREE for examination. Send the coupon, there is no obligation. Get these books and be ready to bid on ANY building or modernizing job NOW.

Consulting Membership FREE!

Privilege of consulting experts of million-dollar American Technical Society on any building problem for one year without charge, if you mail coupon immediately.

For Free Offer Use Coupon

American Technical Society,
Drexel Ave. at 58th St., Dept. G-433, Chicago, Ill.

I would like to look at the five books described above. Send them on your free offer. I will examine them thoroughly and return them in ten days unless I like them in which case I will send you \$2.00 and after that \$3.00 per month until the total price of only \$19.80 is paid. You are also to send me your book, "Blueprint Reading," and consulting membership certificate without extra charge.

Name _____

Address _____
Attach letter stating age, employer's name and address and that of at least one business man as a reference.

A Better Chance to Land the Order and a better Profit for you!



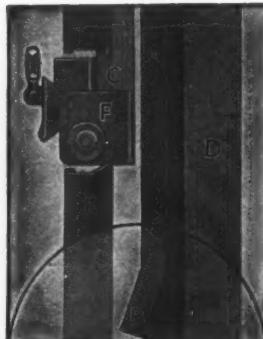
—if you quote on
RO-WAY
Overhead
DOORS

There are three reasons why this is true. *First*, Ro-Way prices are right. *Second*, Ro-Way installations are simpler in new building, require fewer alterations in old buildings, leaving you more net

profit, and *third*, one demonstration of the exclusive Ro-Way "Seal-Tite" feature "out-talks" all your competitors. Bid on Ro-Ways, land more jobs, net more profits.

Only Door with Patented **SEAL-TITE** Molding

—an exclusive Ro-Way Feature. A simple, gravity-operated cam (Fig. B) instantly frees the lower section of the Ro-Way Door in opening, and just as effectively seals the door draft-tight on closing. No other overhead type of door has this valuable feature which eliminates 90 percent of the usual amount of friction.



Note how the Ro-Way Door opens without a particle of drag.



16 Different Types for Commercial and Residential Use

with headroom requirements of $8\frac{1}{2}$ to 21 inches. All standard sizes, as well as special sizes and heavy duty doors with special heavy tracking are available. Ask especially about the Ro-Way low priced doors for residence garages and the Ro-Way specially designed torsion spring high lift doors for use in public service stations.

Write for Complete Catalog Folder

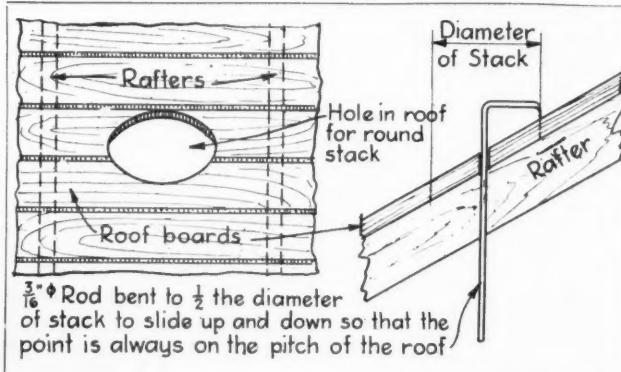
ROWE MANUFACTURING CO.
717 Holton St., Galesburg, Ill., U.S.A.

PRACTICAL JOB POINTERS

A READERS' EXCHANGE of tested ideas and methods, taken from their own building experience. Two dollars or a year's subscription to American Builder is paid for each item published. State business connection or trade.

Cutting Hole for Stack

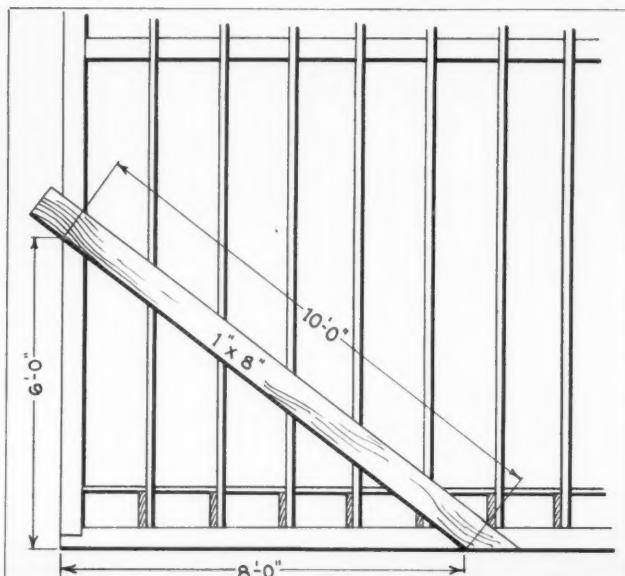
TO cut a neat hole in a pitch roof for any size stack use a piece of straight, stiff wire such as is found in a roll of roofing, and bend the wire to the shape as shown in drawing, one-half the outside diameter of the stack. Then find the center location on the roof, bore a neat hole plumb so the rod will slide up and down easily. This hole should be a neat fit and plumb, then by keeping the point on the roof as a scribe and keeping the rod plumb, work the rod up or down as the pitch of the roof would require, and by using as a compass, you can get the layout accurately and quickly.—J. EDWARD MOORE, Carpenter, Darby, Pa.



Plumb Corner

AM enclosing my idea for a simple method for one man to plumb and erect corner posts and studs without plumb bob or level.

Measure 8' on sill and 6' on corner post. Take 1x8 sheathing and mark off 10' for brace. Then nail brace on corner post on 6' and 10' mark, and on sill on 8' and 10' mark. Result: plumb corner posts.—FRANCIS THOMAS, Builder, Port Richmond, S.I., N.Y.



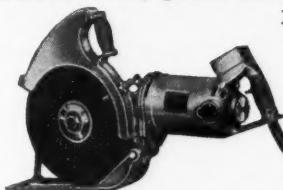
SAVED \$50 per day



Stone purchased in random lengths—at lower cost—was sawed to the required size on the job. This saving in the initial cost plus the saving in material showed that the Stanley Electric Stone Saw used on the job would pay for itself in a very short time.

Stanley Electric Stone Saws with their high speed abrasive wheels offer the fastest method of cutting stone, and leave sharp edges and square corners. They run from any light socket and are easily handled. Gears, spindles and arbors are made from nickel alloy steel.

Heavy duty ball bearings throughout.



The No. CCS-9 has a capacity of 3" while the No. CCS-12 will cut up to 4". Ask your dealer about them or we will gladly arrange a demonstration.

STANLEY ELECTRIC TOOL DIV.
THE STANLEY WORKS
NEW BRITAIN, CONN.

STANLEY ELECTRIC TOOLS

A complete line of Portable Electric Saws, Hammers, Drills, Screw Drivers, Grinders and Unishears—the motor driven hand shears.

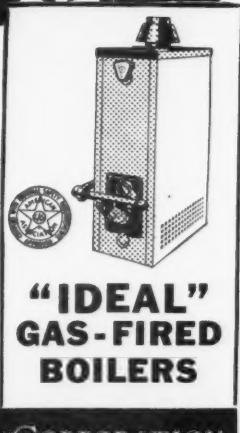
...and when I said "IDEAL" GAS HEATING bingo—a sale!



Smart buyer! Knows the carefree comfort, the constant warmth that an "Ideal" Gas-Fired Boiler means. And smart builder, to put "Ideal" Gas Heating into his homes!

Both builder and buyer know that "Ideal" Gas Heating is efficient, economical, dependable. It is backed by the experience and research of the best known name in heating — American Radiator Company.

"Ideal" Gas Boilers come in sizes for every type of home, they are easily installed, automatically controlled, powerful selling aids. Write for literature.



AMERICAN GAS PRODUCTS CORPORATION
DIVISION OF AMERICAN RADIATOR COMPANY
40 WEST 40TH STREET, NEW YORK, N.Y.



*Wrapping up
the most valuable
Purchase of a
Lifetime!*

YOUR customer is making about the biggest investment of his lifetime when he builds a home. He wants this investment well protected. And he wants the family that is to live in the house protected against drafts and cold floors. He wants to save heating costs. He wants to avoid damp, spotted plaster.

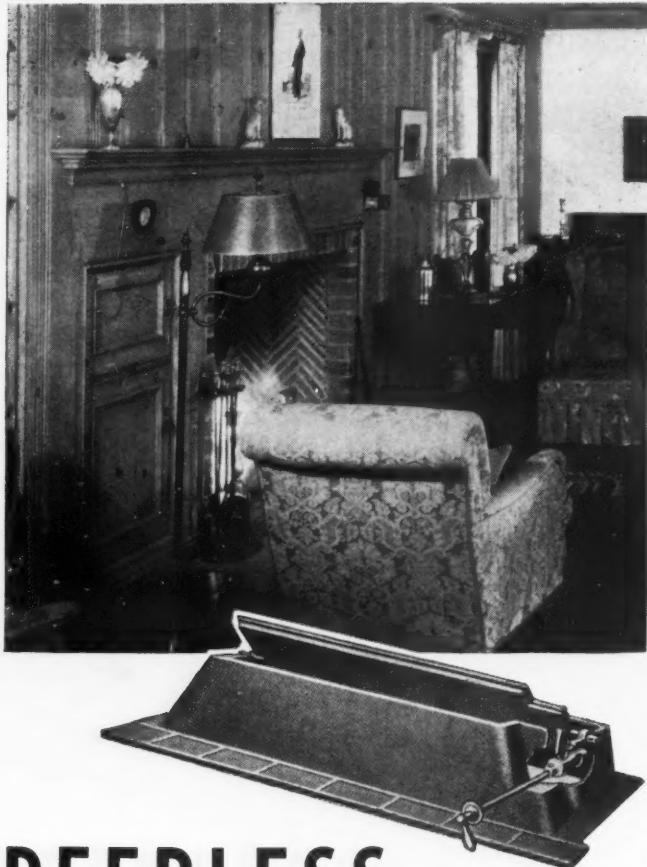
You can give him all these things by insisting on Sisalkraft in walls, floor and roof. It's a satisfaction to recommend this tough, strong, permanent building paper because any owner will immediately recognize its superior quality. Here's one building material that is actually and easily self-demonstrating.

And, don't forget, building paper when installed, can't be replaced. The time to think about the protection your customer will want in the future is right now—while he can still make the right choice —Sisalkraft.

THE SISALKRAFT CO.
205 W. Wacker Drive, Chicago, Ill.

SISALKRAFT
REG. U. S. PAT. OFFICE

ASK About



PEERLESS FIREPLACE DAMPERS

We will send you complete information. You no longer need to hesitate when your client asks you if the fireplace will work.

Where Peerless Dampers are installed the fireplace always works. No back drafts—no smoke—no heat loss. Three models to choose from—Rotary Control—Poker Control—Chain Control. All standard sizes. Built of heavy stove plate cast iron they will last indefinitely.

Write for illustrated literature. It will be sent you free of charge. The coupon below is for your convenience.

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Fireplace Fixtures—Ash Dumps—Coal Windows—Ash Pit Doors—Garbage and Package Receivers and Hearth Fyre Gas Heaters.

PEERLESS MFG. CORP.
1400 W. Ormsby Ave.
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Please send Peerless Fireplace Damper Information Other Building Specialties.

Name _____

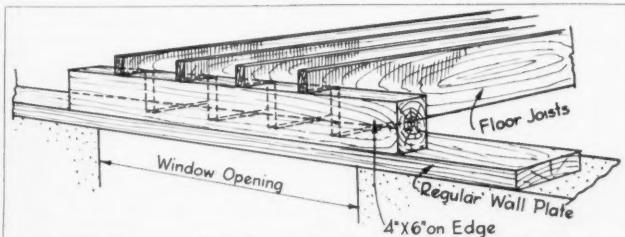
Address _____

Town _____ State _____

Stronger Window Span

WHILE recently designing a residence for a lady who insisted upon setting her piano over a wide cellar window where the floor beams ran at right angles to the wall, in order to spread the load to both sides of the window so that the casement sash would not bind, I designed the plate as follows:

The regular plate was, of course, laid flat. I strengthened the floor by laying a 4x6 plate on edge 12" longer than the width of the window (6" either side). Both plates were flush on the outside. The ends of the beams were notched to fit both. The flat plate was on the bottom.—PETER A. SMITH, Architect, Poughkeepsie, N.Y.



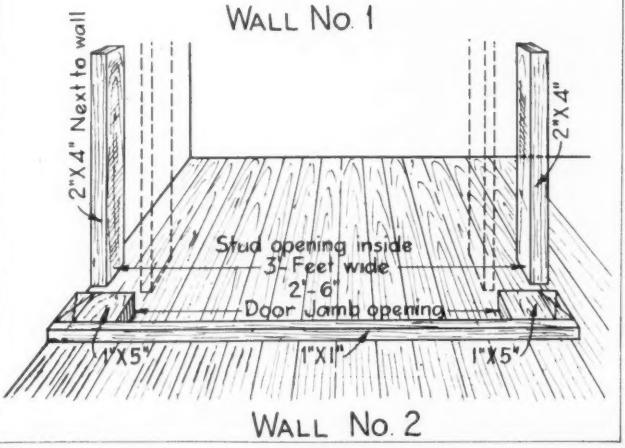
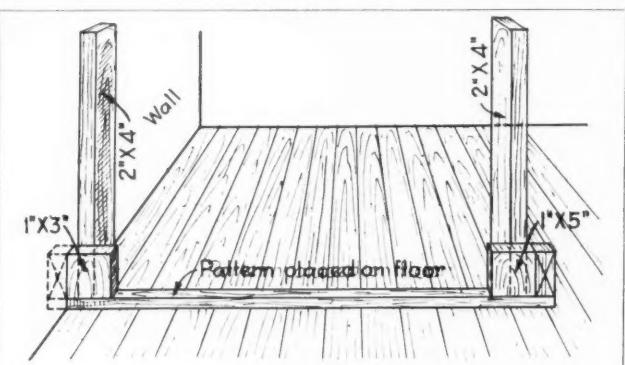
Extra support for window span

Pattern Marker

HERE is a pattern marker which is handy on the job when cutting door openings for inside. This pattern is not only handy for beginners on rough work, who are not as familiar in knowing the exact width for inside doors, but also for old-timers who often make mistakes, especially where the specifications call for all door casings the same width, as shown in sketch No. 2.

The pattern is placed flat on the floor showing you the two cross stud marks where the door casing is to be nailed on; also the dotted lines on No. 2 show the door jamb and the space from the 2x5, especially against the wall.

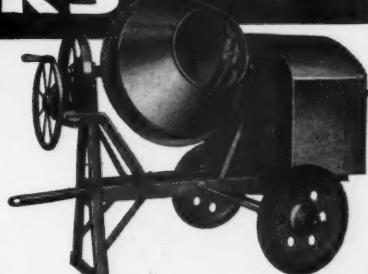
By using this handy pattern marker, it not only saves trouble, but one can't go wrong because it shows you on the pattern the width of casing, also the cross mark for the 2"x4" studs.—JOSEPH J. ZAR, Carpenter, Olyphant, Pa.



Pattern used for door marking

KWIK-MIX MIXERS

Full anti-friction bearing. Light weight. Skip shaker. Automatic water tank. Spring mounting. Sizes: 3½-S, 5-S, 7-S, 10-S.



3½-S Trailer — Roller Bearing — Spring Mounting.



Plaster and Mortar Mixers
Trailer and 4 Wheel Type.

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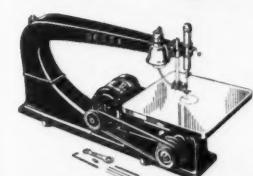
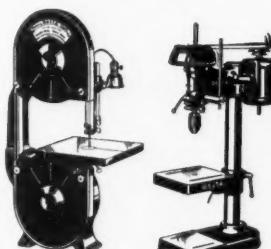
Desirable territories are available to progressive Lumber and Materials Distributors

KWIK-MIX

Write for Catalog AB

KWIK-MIX CONCRETE MIXER CO.
PORT WASHINGTON . . . WISCONSIN

Delta Motor Driven Tools Cut Costs!



Contractors all over the United States are employing these sturdy, efficient Delta tools to reduce their labor costs and save time on Modernization and Repair Work. Delta tools can be taken right out on the job. Although compact and portable they are so skillfully designed and carefully built. They turn out clean accurate jobs even under the heavy grind of production work. Best of all they are so moderately priced as to require a minimum initial investment. The complete Delta line includes: Circular Saws, Jointers, Band Saws, Scroll Saws, Drill Presses, Router, Mortising and Sanding Units, Lathes and a complete line of motors, accessories and stands.

For full details, prices, and name of nearest Delta dealer write to

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GOOD enough
for homes like
these . . .



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Mt. Lebanon, Pa.

INEXPENSIVE
enough for
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Invisible Warmth is used in "show place" homes—because no finer, more dependable, more permanent heating can be found. It is used in modest homes . . . because it costs so little more than exposed radiation.



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Invisible Warmth is made possible by Aero, the Lifetime Cast Iron Convector, and the noteworthy National Boilers. It gives the builder a PLUS sales appeal, that changes a prospect to a customer quicker and easier. Ask for information as to how National Equipment can give added sales appeal to the houses you build.

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232 Central Ave., Johnstown, Pa.

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BUILD GOOD WILL WITH A KNOWN PRODUCT

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When you sell Celotex you are building good will for yourself because you share the good will Celotex has earned.

With the building season now on and greatly stimulated by the NHA, you have the further advantage of offering the customer in Celotex a four-purpose material. It builds, insulates, decorates, subdues noise.

And now, as always, you have the utmost in helpful co-operation from us.

Do Your Customers Know That—All Celotex Cane Fibre Products are manufactured under the Ferox Process (patented) and therefore effectively resist damage by Fungus Growths, Dry Rot and Termites (White Ants)?

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CELOTEX
BRAND
INSULATING CANE BOARD
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BUILDS • INSULATES • DECORATES
SUBDUES NOISE



NEW PRODUCTS

FOR FURTHER INFORMATION about any new product write the American Builder Information Exchange, 105 West Adams Street, Chicago, Ill.

Termite Protection

A CONCENTRATED wood oil known as NO-D-K, manufactured by Tennessee Eastman Corp., Kingsport, Tenn., is now being sold which adds many years to the life of wood, thoroughly protecting against both termites and decay.

This oil is composed of the natural decay resistive chemicals which were present in the living tree. It has four times the killing strength of pure carbolic acid and offers unusual protection against decay and insect attack. At the same time it is not caustic and will not burn the skin.

Having been extracted from wood, NO-D-K will penetrate deeply back into it. Another feature of interest is its high boiling point. It does not become sticky on the wood during hot weather, but remains in the wood indefinitely to protect it. It is not soluble in water, therefore is not readily leached or soaked out by the rain. It does not crack, chip or peel and two coats give excellent protection.



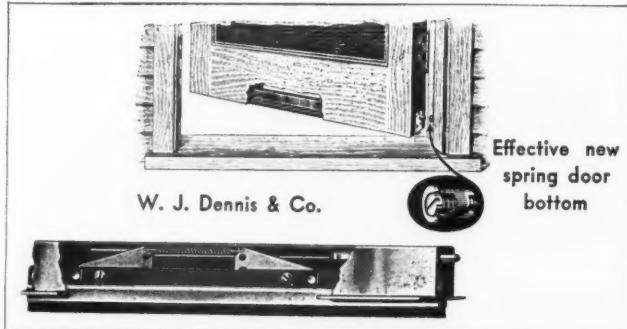
Applying termite protection

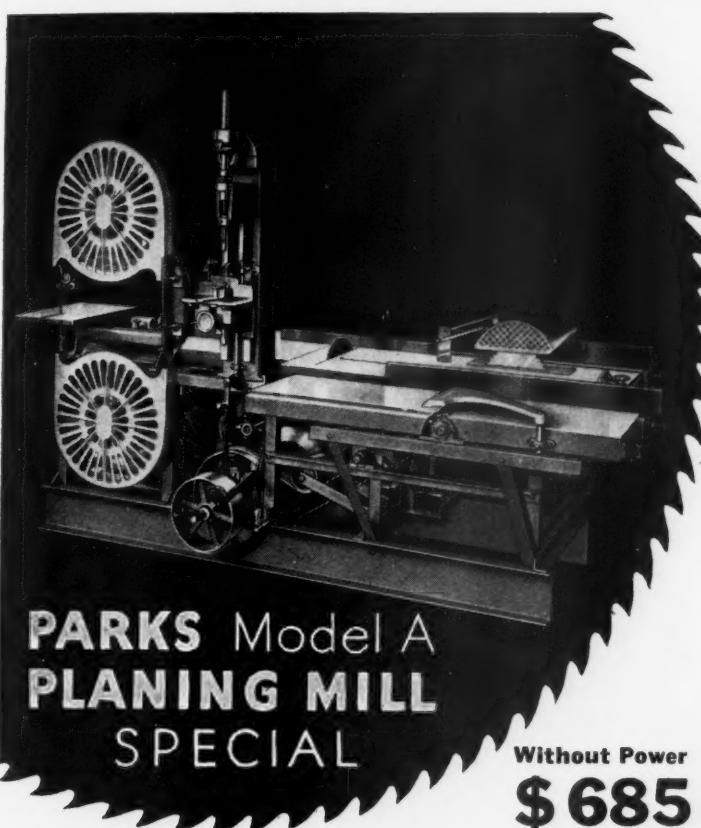
New Spring Door Bottom

THE new in-a-door automatic spring door bottom is made by W. J. Dennis & Co., Chicago, from electro galvanized steel and steel stampings, cadmium plated, with jamb button of solid brass. All parts are rustproof, inlaid with rubber-shod (moth-proof and waterproof) felt. It works right or left without change.

The application of this new door bottom to the bottom of bedroom doors will stop all air leaks and leave the other rooms in the home warm and comfortable. The fuel saved will pay for the installation cost in sixty days' time.

It is easily applied, and no fitting is necessary. All one has to do is to cut a groove size $\frac{5}{8} \times 1\frac{3}{4}$ inches deep in the bottom of the door, cut door bottom to size and apply with nails or screws.





**PARKS Model A
PLANING MILL
SPECIAL**

Without Power
\$685

LARGEST WORKING SURFACE OF ANY COMBINATION MACHINE

Includes cast-iron double table rip and crosscut saw, 22" band saw, swing cut-off saw, 12" jointer, tenoner, upright hollow chisel mortiser and borer, reversible spindle shaper and 18" sanding disc. Complete with one 12" cut-off saw, one 12" rip saw, one 10" cross-cut saw, one 3/8" band saw, and five belts.

It's a JAEGER

Recognized biggest value.
Fast 3 1/2 S Trailers.
Power Load Tilters 3 1/2,
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to 56S sizes.

GET OUR
LOW PRICES

THE JAEGER MACHINE COMPANY
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REAL PERFORMANCE

EIGHT MACHINES IN ONE INDEPENDENTLY OPERATED

The new Model A Planing Mill Special is a complete modern shop in itself, performing your woodworking operations quickly, efficiently and at a profit! Its sturdy and compact construction cuts down repair bills. Its low operating cost increases profit. With the largest working surface of any combination machine you can handle bigger jobs better. Each unit independently operated. High-grade Ball bearings throughout. Will last for years.

Write for descriptive circular.

THE PARKS WOODWORKING MACHINE CO.
Dept. BL-4, 1524 Knowlton St., Cincinnati, O.
GOOD WOODWORKING MACHINES SINCE 1887



No Wonder It Sells

Many a Builder found this remarkable equipment a "life saver" during the last two years. Sales of "over-the-top" Door Equipment came surprisingly easy—especially for remodeling jobs.

Here's the reason: "Over-the-top" Door Equipment is applicable to stock doors, old or new. A child can operate it. It is easily installed—weather tight—never needs servicing. It sells for less than any other type, yet there is a generous profit if you co-operate with the dealer in your city. Write for complete information.

FRANTZ MFG. CO., Sterling, Illinois



IRON RAILING

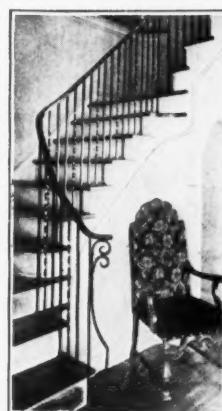
Of Every Description
For Interior and Exterior Use

Also

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window guards, Chain Link Wire
Fence, etc.

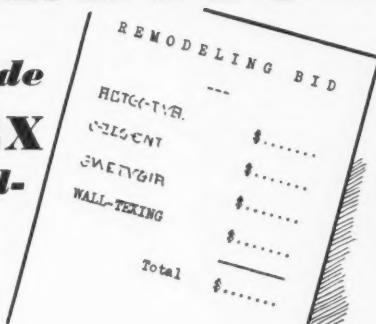
Send measurements showing your
requirements and we will forward
illustrations suitable for your en-
closure.

CINCINNATI IRON FENCE CO. INC.
3007 Spring Grove Ave.
CINCINNATI OHIO



Make the most of that *EXTRA* *PROFIT* you can earn on DECORATION

• **Include**
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*in your remod-
eling bids*



Hang on any smooth surface



Prevents—Hides Plaster Cracks



Can be washed and washed



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Every WALL-TEXED job is a constant advertisement of your work—helps to make your service more distinctive.

More than 185 exclusive patterns provide pleasing selections for every decorative scheme.

Mail the coupon today for complete details.

Columbus Coated Fabrics Corporation, Dept. AB-45, Columbus, Ohio.
Please send me Wall-Tex file folder 28-C-1, including Wall-Tex samples.

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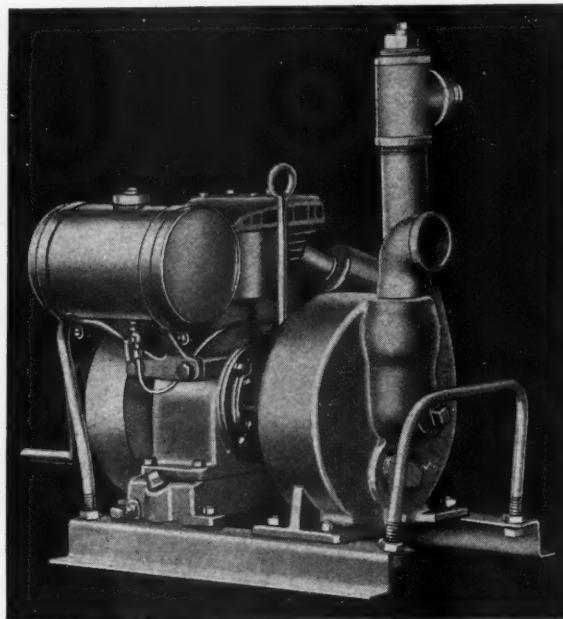
decorative wall canvas

160 Lb. Utility Pump

C. H. & E. Manufacturing Co., Inc., Milwaukee, Wis., announces a new self-priming centrifugal pump, developed for general utility dewatering work. It is light in weight (160 lbs.) for easy handling.

The new outfit consists of a small, light weight 2" pump mounted on steel skid, and powered by a Briggs-Stratton 2 H.P. air cooled engine. The new pump is called the No. 41, and is featured by its large capacity and simplicity and ease of self-priming. Manufacturer claims that this pump operates absolutely without vibration, regardless of its light weight.

The No. 41 pump was designed to fill out the C.H. & E. self-priming pump line which ranges in size from 2" to 8". This line is described in a new catalog No. SP-35.

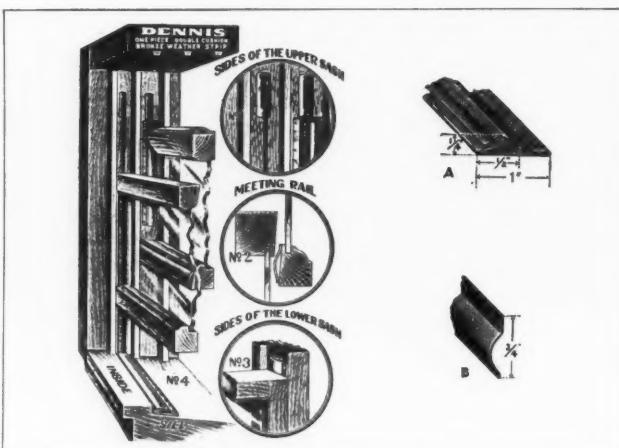


New self-priming centrifugal pump

Double Cushion Weather Strip

A NEW double cushion spring bronze all metal weather strip is illustrated below which is different in construction from others. Metal is folded S shape, which gives a double spring action, preventing the contact part of the weather strip from losing its resilience, which produces tension to keep out the wind, rain, snow and dust.

The new strip stops cold air leaks, and makes snug weather-proof seal conforming to all warping, shrinkage and expansion of sash and doors. It is easy to apply, mechanical skill not necessary. Tack hammer and shears are only tools needed. This type double cushion strip can be applied without grooving or removing sash or doors. It is made by W. J. Dennis & Co., Chicago.



Double cushion bronze weather strip

RENEW OLD BUILDINGS with PLASTIC STUCCO

COLORCRETE a time proven process in actual use for six years in practically every climate. Sprayed in plastic form, it fuses itself to the surface becoming a part of it. Now with the additional development of SEALCRETE, a waterproof undercoat, you can apply a permanent overcoat of masonry in any thickness desired on any surface.

Big Money in Resurfacing

Hundreds of buildings everywhere need this renovizing process. With COLORCRETE you can now offer a new, permanent, waterproof surface in a choice of over 30 colors and shades at amazingly low cost. Many operators report costs of 8c to 10c per sq. yd., and sell at 20c to 35c per sq. yd. Machine capacity 40 sq. yds. per hour. Some have paid for their equipment from first job. Spraying machine furnished on ten days free trial and easy payments. Your territory protected by franchise. Get prepared now. Cash in on big government modernization campaign. Write today for bulletin C-4.

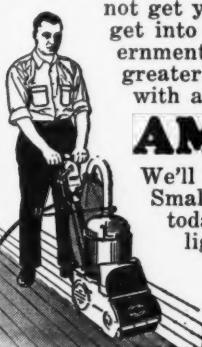
COLORCRETE INDUSTRIES, Inc.

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MAKE BIG MONEY THIS SPRING

Thousands of dollars will be spent during Spring housecleaning time for refinishing old floors. Why not get your share? This is your chance to get into something for yourself. Big Government Housing Program is creating greater field than ever. Get started now with an



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We'll help you. No experience necessary. Small down payment starts you. Write today for full details sent without obligation.

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Lends unsurpassed beauty and charm to living room or recreation room. The modern fireplace for modern day requirements.

Large variety of attractive models in stone or brick available.

Shipped complete anywhere—ready to be installed in hour's time of handy man—suitable for gas or electric heat.

Dealers, Builders, Homeowners write for prices and full information.

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no REPLACEMENT COSTS in thirty years

An average service of 30 years has been established by test for Samson Spot Cord.

More than forty years of actual use substantiates these tests.

Samson Spot Cord is specified by architects because such specification is definite and positive—Spot Cord is made in one grade only and is identified by the trade mark, the colored spots. Substitution is easily detected and is unnecessary because Samson Spot Cord is available to contractors and builders through Hardware and Supply dealers in every section of the United States.

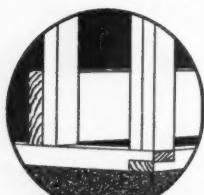
SAMSON CORDAGE WORKS
89 Broad St. Boston, Mass.

Made of extra quality fine three ply yarn, and guaranteed free from imperfections. Firmly braided, smoothly finished. Six standard sizes.

If you haven't a Spot Cord specification folder in your files write for copy. It gives complete data, comparative tests, etc.

Where do you find Termites?

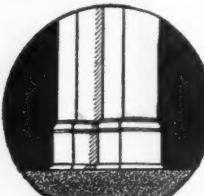
Vulnerable points for Termite damage



1. Plates and corner posts.



2. Sills.



3. Porch columns.



4. Sheathing.

ARE you in a territory infested by these wood consuming insects? Until recently, you probably would have answered definitely "No." But in recent years people have suddenly become conscious of their existence, and today it is not uncommon for a community in most any state to report termite damage in wood structures.

When termites are actually known to threaten, preventive measures are necessary. Remember that other people have faced this problem for generations. It is nothing new. The value of preservatives to resist termite attack has been adequately demonstrated over generations of time. It requires long-time tests to warrant definite conclusions in this field.

Two preservatives stand out as time-tested—creosote and zinc chloride. These treatments are available, backed by the long experience of this leading organization in the field of wood preserving. Get the established facts about termite control.



AMERICAN CREOSOTING COMPANY



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CREOSOTING
COMPANY
INCORPORATED

GEORGIA
CREOSOTING
COMPANY
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LOUISVILLE — KENTUCKY

LETTERS from readers on all subjects

Facts, opinions and advice welcomed here

Confidence in Builders

St. Louis, Mo.

To the Editor:

Your editorial "Restore Confidence in Builders," which appeared in the March issue of the AMERICAN BUILDER was of particular interest to our company, in view of a campaign inaugurated by us early in January, which was for the sole purpose of establishing public confidence in the contractor and placing him back into the position in which he rightfully belongs.

We are using direct mail pieces to explain our campaign, which is also carried through billboards, newspapers and radio advertising.

The response to this campaign from the contractors has been very favorable and has helped raise their morale which seems to have reached a pretty low ebb during the past few years.

CENTRAL HARDWARE COMPANY,
D. L. Oxenhander.

Against Licensing Contractors

Bronx, New York.

To the Editor:

In the March issue there appeared an article on a License Law for contractors which was termed one of the most important pieces of legislation ever developed for the benefit of contractors. At this time of hysteria for the regulation of business by law, it might be well to investigate the purposes and possible effects of laws to license builders and create commissions to regulate their business.

We begin with the assumption that neither the public nor the building industry desire additional laws and regulations unless the public need requires such legislation. The basis of such a law would be essentially that of public safety. By public safety is meant physical protection and not defense against the practices of the building business. I know of no industry where the public confidence is so enjoyed as the building industry, nor of any investment in which people so confidently entrust their life savings.

Safety of a building is chiefly involved in the design of a structure, and to a lesser extent in the carrying out of the work. The fact that the planning of buildings has been turned over to the architectural and engineering professions, either by practice or legislation, and the actual practices of construction is regulated by numerous building and labor laws, removes a great part of the responsibility for the safety of a structure from a builder. Is there any reason to suppose that additional legislative acts would cause better buildings to be built or eliminate what mal-practices may exist?

An examination of the buildings which are exempt from the provisions of the proposed Ohio Act shows that the factor of safety is not the chief purpose of the measure. The construction of private dwellings, farm buildings, utility buildings or government structures requires the same competency on the part of the builder as the types of buildings included in the act. Another part of this Ohio measure which indicates a purpose other than public safety is that which provides exemption for work under \$100.00 in cost. It is obvious that such exempt work might involve a serious impairment of the structural safety of a building, while a job costing many times this amount might not involve any structural part of a building whatsoever.

The writer of the article in the March issue states that such legislation is particularly timely because plans, specifications, materials and work are subject to approval of Federal Housing Administrators' appraisers and inspectors in connection with NHA building loans. Quite the opposite! If such "expert" supervision is made an incompetent builder would find himself exposed and out of business very quickly without any legal aid.

(Continued to page 114)

REMODELING

Usually Includes

FLOOR SANDING

Let the REID-WAY "8"

Bring You This
Added Profit

The refinishing of floors is a service which can be sold on nearly every remodeling job. Don't overlook this profitable business.



The REID-WAY
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2956 First Avenue
Cedar Rapids, Iowa

The Reid - Way "8" is the ideal machine for all-round use of contractors. It is light enough to be easily portable—75 pounds. It will out-perform machines weighing nearly three times as much.

Learn more about the remarkable Reid-Way line of "one moving part" sanders. They are remarkably low-priced. Circulars describing the complete line of floor and bench sanders will be sent on request.



**Bring your
INFORMATION
ON MEDUSA PRODUCTS
UP-TO-DATE . . .**



With increased activity in building comes the time to renew your acquaintance with Medusa White and Gray Portland Cements and Medusa Cement Products that make for better construction.

One of the booklets shown above tells how to make good waterproof concrete, giving specifications on portland cement stucco and terrazzo, made with non-staining Medusa White Portland Cements, plain and waterproofed. Another folder deals with Medusa Stoneset, non-staining waterproofed mortar cement.

Other booklets describe the masonry cement, Medusa Mix—Medusa Waterproofing Powders and Pastes for concrete and mortar—Medusa Portland Cement Paint for painting concrete stucco and masonry surfaces, either exterior or interior—Medusa Floor Coating, a new product that makes a durable, moisture-proof, water, acid, alkali and abrasion resisting coating on concrete floors.

Check the items you are interested in on the coupon below and send it in at once. There is no obligation on your part.

**MEDUSA PORTLAND CEMENT CO.
1002 MIDLAND BUILDING • CLEVELAND, OHIO**

MEDUSA PORTLAND CEMENT COMPANY

1002 Midland Building • Cleveland, Ohio

Gentlemen: Without obligation, send us How to make good Waterproofed Concrete , How to Paint Portland Cement Stucco, Concrete Floors and Other Masonry Surfaces , Medusa Stoneset Cement , Medusa Waterproofing , Terrazzo Specifications , Medusa White Portland Cement Stucco .

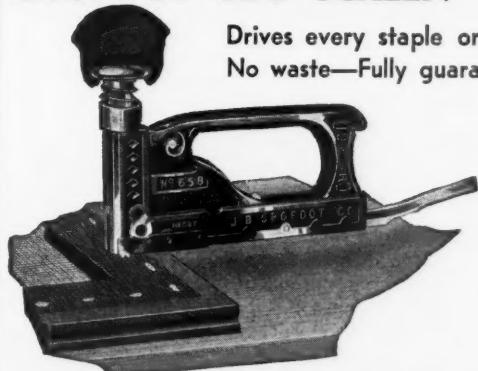
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City _____ State _____

CROFOOT 658 SCREEN TACKER

Drives every staple on the strip.
No waste—Fully guaranteed.



J. B. CROFOOT CO., P. O. Box 783, Chicago, Ill.

Used by
the leading
screen mak-
ers in the
U. S. A.

NEW — BETTER — DIFFERENT Warren-Knight Transit-Level

A moderate priced combination transit and level for general engineering and contracting. Eliminates the objections to Convertible Levels.

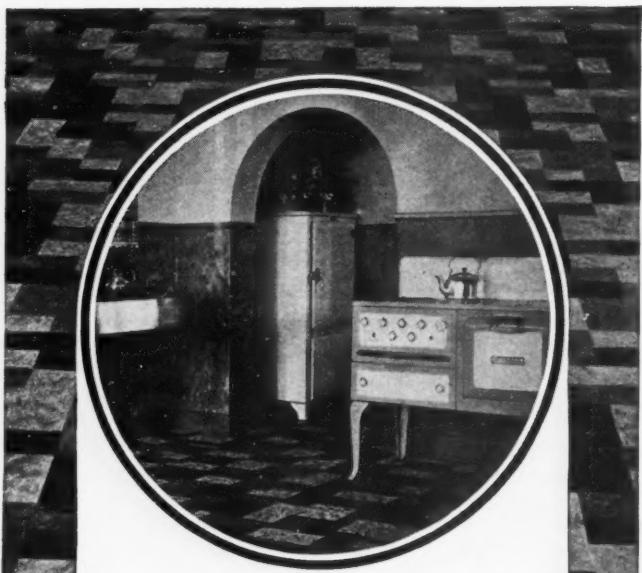
10 DAY FREE TRIAL
No deposit—no obligation to purchase

You need no longer take the telescope out of the wyes for line and grade work. The vertical are with clamp and tangent enables you to set the telescope accurately and LOCK it at any vertical angle desired. A plate level enables you to be sure the instrument is level at all times. There are many other advantages of design and construction given in Bulletin F-94. It's Free. Write for it to



TRANSIT-LEVEL
Model 38-b \$150.00
Made also without compass
and are at lower prices.

Warren-Knight Co.
136 N. 12th St., Philadelphia, Pa.
New and Used Instruments for SALE or RENT



"What an Attractive KITCHEN!"

MANY a prospect has said, "What an attractive kitchen"—or bathroom, or any other room—when the biggest factor in generating that enthusiasm was a sparkling Armstrong's Linoleum Floor. There is selling power in these colorful, modern linoleum floors, the kind of selling power that makes it easier to sell and rent homes or apartments that have them.

Put Armstrong's Linoleum Floors in the homes and apartments you are planning. Then watch the difference. You will find what so many other builders have found—that it is a powerful sales argument to be able to say, "These floors are Armstrong's Linoleum."

Write for the free book, "Floors That Keep Homes in Fashion." It contains a wealth of ideas for builders. Armstrong Cork Products Company, Floor Division, 1218 State Street, Lancaster, Pennsylvania.

COLORFUL WALLS, TOO

Be sure not to pass up Armstrong's Linowall, a new material for kitchen and bathroom walls. Colorful, beautiful, permanent, and economical. For new homes or old. Write for information.

**Armstrong's
LINOLEUM FLOORS**
for every room in the house



LETTERS—Continued

Let us consider several other fallacious theories and arguments noted as "widespread benefits of this important law." The writer states that the law "should create a new confidence in and demand for homes, causing the public to become conscious that the entire fabrication of a building under the regulations of the law represents the use of approved materials, skill in assembly, craftsmanship in performance, strict regard of plans and specifications, careful regard of the Building Laws of the State, a meticulous record keeping of receipts and disbursements, and many other items entering into the business relationship between the contractor and owner." Who has ever heard of a firm hesitating on building a skyscraper because they doubted the competency of available builders, or a homeowner postponing building until he could secure a "licensed" contractor? Why home builders enjoy the greatest degree of public confidence, and anyone knows that the retardation of the industry is caused by the factors of taxation, finance and reduced income, to which may be added the general feeling of uncertainty. How in the world would a state law assure use of "approved materials," or any other quality cited? Why do we need another law to assure "a careful regard for Building Laws"? In the matter of carrying out plans and specifications there is the law of private contract, building laws and criminal law which certainly need no assistance from a licensing law, which incidentally would be wholly inapplicable to the subjects noted. The "meticulous" accounting system and other such matter is wholly irrelevant to the issue under discussion.

The impracticability of the measure is indicated by the writer when, even before it is made law, he notes, "the necessity of careful policing of the act" to raise the status of the builder. The writer then proceeds with the following blather which has not the slightest relationship to the subject of licensing: "The New Deal (license law) in building should make the builder a better student of his business; he will be compelled to give new thought to design, to be an active student of costs, and to be on the alert for new products and new methods, by the use of which his costs may be lowered; he will make of himself a creative salesman with new confidence in himself and his profession because he will now be endowed with the realization that he is no longer subject to the wiles of the Jerry Builder, the unscrupulous hatchet and saw artist."

Let us consider for a moment the realities of a license law for builders. In the first place enactment of such a measure would provide for the licensing of all builders and contractors who wish to pay a fee, that is, no legislative act would force builders out of the business. Included in these licensees would be the so-called "Jerry Builders" and real estate men whose building is done by a number of low-bidders. Incidentally, a skilled mechanic, though he be an employee, knows more about building construction than many of our large speculative "builders." In order to keep down opposition to such regulations and get started, the gates are left open for a few years to all applicants, and then the tightening up process begins. At each session of the legislature laws are slipped through without public notice or interest. Then some of the more ambitious members of the examining board get the idea that the building industry is really a "profession," and decide that a college diploma is essential for a license as a builder. All that is necessary then is a precise code of ethics, the establishment of the cost-plus system, and a large waiting room for "clients."

There is nothing which serves the industry so well as an active association of builders. The discussion of common problems and unity of action on matters affecting members or the general building activity creates better business and solution of common problems. But calling for more laws, careful policing, and additional regulations is an indication of weakness of the proponents, an inexplicable lack of faith in the material advantage of good construction practice, and a wholly mistaken idea of the efficacy of a licensing provision.

JOHN F. ST. GEORGE,
Building Construction.

Asks Extension of FHA Appraisal Service

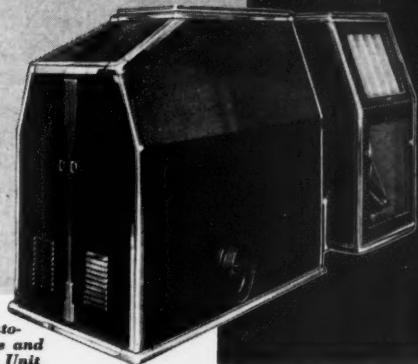
Cleveland.

To the Editor:

I would like to propose that modernization clinics should be established in various cities by the Federal Government, through

(Continued to page 116)

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Chicago

LETTERS—Continued

FHA, the personnel of each Clinic to consist of a manager, a realtor (with appraisal and property management experience), an architect (modernization experience), and a builder (estimating and superintending modernization experience). Such clinics to make preliminary surveys of well located buildings that need modernizing.

If a building qualifies as to location, construction, equity, etc., also lends itself to economical modernization, the clinic would employ a realtor and an architect to collaborate in the preparation of the following:

1. Appraisal and operating statement.
2. Architectural sketches.
3. Specification lists of work of all trades.
4. Complete contract bids.
5. Statement from U.S. approved financial institution, offering to make a loan (20 percent Government Insured).

Realtors and architects to prepare and obtain the above on the following basis:

Fifty percent of a reasonable fee to be advanced upon delivery of the above documents.

Balance of fee to be paid, if and when the owner signs a construction contract.

The entire amount of the fees to be included in the loan and paid by the owner if the work goes ahead.

With 50 percent of their fees contingent upon their ability to wisely select, beautify and economically modernize the buildings, the realtors, architects and builders will have a great incentive to confer and cooperate in an effort to make the maximum amount of improvement at a minimum of cost.

In my opinion, a brief, as outlined above and the inability to finance its preparation, is the missing link that is holding up hundreds of millions of dollars worth of modernization work at this time.

The owner must have all of the above information before he can decide to go ahead.

THE SCHRADER CONSTRUCTION CO.,
Howard C. Schrader, President.

"Babbling" of Mass Production

Chicago.

To the Editor:

Permit me to express my approval of your editorial in the March issue of AMERICAN BUILDER, "Bricks, Nails and 2x4's." You certainly hit the nail on the head.

We have had so much "babbling" on new types of home construction in mass production that the public is very much confused. They have expected to get a 20 percent saving in the walls of a home, but are not objecting in any way to spending additional sums for refinements, as oil burners, electrical refrigeration, air conditioning, more electrical outlets, etc.

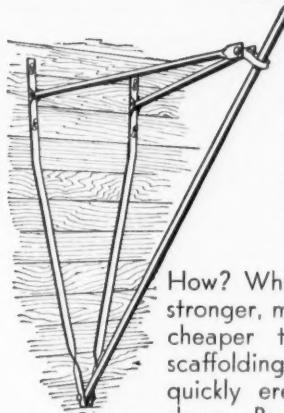
Even as famous a man as Architect Wiley Corbett has poked fun at brick being laid in the wall one at a time. My answer to him is contained in the enclosure, which relates to the construction of the Washington Cathedral.

ALBERT W. LUSE, Secretary-Manager,
Chicago Face Brick Bureau.

WASHINGTON CATHEDRAL—Answering the question—"How much quicker can we build a cathedral now, due to modern machinery, than they could build great churches in the Middle Ages?"—Architect Philip Frohman says:

"Strange as it may seem, we cannot build a monumental church any quicker now than they could in the 13th or 14th century. Even with the speeding up of cutting stone in the mill, improved methods of transportation and delivery of materials, power operated derricks to raise heavy stones, after all, in a building of the most monumental type, of solid masonry construction, with thick walls, the speed of erection is finally determined by the men who set stones or lay brick. This skilled work cannot be done by machines. We have no mechanical substitute for stone masons and bricklayers, nor have we any mechanical device which will enable them to do their work any faster than they did it seven hundred years ago. The average modern stone setter lacks the experience of the average mediaeval mason on this type of work. With the aid of pneumatic tools the stone cutter can save time in roughing out the work, but the finished sculpture, as of old, must be finished by hand."

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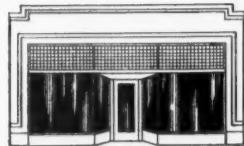
How? Why? Because they are stronger, more dependable and cheaper than costly wooden scaffolding. Because they are quickly erected, quickly taken down. Because you can use them on wood or stucco. No wonder they soon pay for themselves. Thousands of builders have used them for years.

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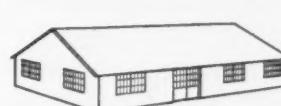
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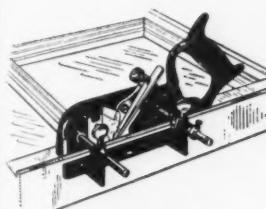
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No. 378 is furnished with 11/16" cutters. If desired, 3/4", 13/16", 7/8" or 1" cutters may be had.

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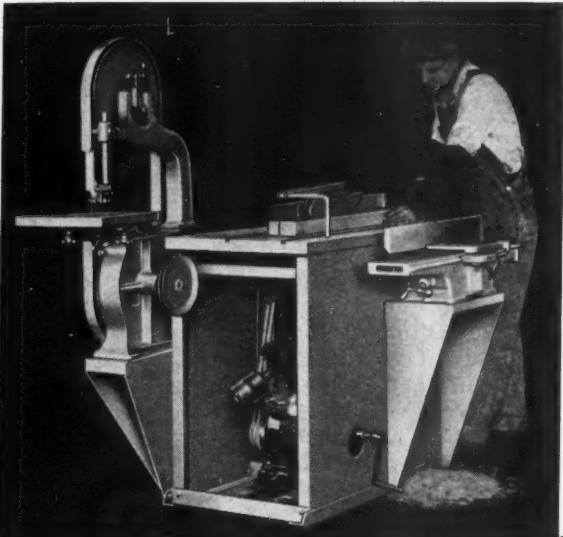
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Designed for fast production and precision work. IT'S NEW—light in weight and LOW IN PRICE.

Can be furnished with gasoline engine or electric motor power installed. An ideal shop tool and can be easily taken out on the job.

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Allwood Specifications

(Continued from page 98)

shower door, pebble plate glass; Peerless Shower Door Co. Venetian metal medicine cabinet, U.S. Metal Box Co., recessed in wall; plate glass mirror door.

SCREENS—All windows bronze screening.

HARDWARE—Loose pin McKinney Non-Mortice butts on inside and Non-Loose on outside. Front entrance door cylinder spring lock, 2 keys. Side, rear doors 3 tumbler locks, bronze knobs and key plates. Bommer hardware for double swing door between dining room and kitchen. Contractor to furnish all hardware, National Brass Co. "Dexter" design.

METAL WORK—Leaders 3", copper, wide laps with good holdfasts. Wherever roofs come in contact with vertical surfaces, etc., flash and counter flash with 16 gage copper turned up 8" under vertical surfaces.

PLUMBING—4" extra heavy cast iron pipe to run up 2' above roof, connected to sewer pipe 3' beyond outside cellar wall, soil vented by main trap with 2 brass ferrule screw clean outs. 2" galvanized iron vent pipe with branches from cellar to roof, connected to soil pipe with Y and $\frac{1}{8}$ and 1/16 bends.

Water carried into house by $\frac{3}{4}$ " Rome Copper & Brass Co. pipe.

40 gallon galvanized tank and hot water heater, hung horizontally to floor beams connected to General Electric Oil Burning Boiler.

Water supply pipes inside, Rome Copper & Brass Co., copper $\frac{1}{2}$ " circulation. Where exposed in bathroom to be brass, chrome plated.

Bath and Kitchen—1 Standard "Pembroke" tub 5'0" long, combination fitting complete. Shower compartment with Standard 3 needle point shower with mixing chamber. Standard Iron Enamel basin, chromium legs, 20"x20" complete. Silent T.N. Water Saver tank and toilet combination, white double seat. Standard 72" double drain-board acid resistant Iron Enamel Kitchen Sink, dual chromium strainer and combination chrome plated swivel faucets and chrome plated soap dish, to be set 36" from floor. One Space Saver hanging basin in 1st floor kitchen toilet.

Kitchen stove L. & H. No. 2100 Console Insulated Gas Range, automatic lighter and regulator, to be set up and connected ready for use. Gas pipes $\frac{3}{4}$ ", all joints with red lead.

HEATING—Complete installation single pipe steam system. General Electric oil burning unit. All steam outlets from boiler full size. Boiler set proper grade to mains. Connect burner to chimney with No. 20 gauge galvanized iron smoke pipe, closely fitted and cemented at chimney. All piping full weight National. Branches leading from mains to risers to be taken off on 45 degree angle. Swing connections.

Steam pipes covered with H. W. Johns-Manville "Asbestocel." Supply and return mains pitch at least 1" in 20'. Branch connections pitch at least 1" in 4'. Radiators Gothic 3 and 5 column 26" high, American. Quick opening Detroit Steam Valves.

ELECTRICITY—Conductors continuous from outlet to outlet; no splices except in outlet boxes. Plug receptacles located 18" above floor, wall brackets 5'6" above floor. Wall switches 4'0" above floor. Outlets centered with regard to paneling, furring, trim. Wall switches flush, toggle pattern with Bakelite face plates, double pole, three way or single pole as shown.

Base outlets double plugs with Bakelite plates.

Electrical fixtures Lightolier Co.

PAINTING AND DECORATING—Outside woodwork and siding 2 good coats best white lead and linseed oil paint; interior woodwork 2 coat porcelain undercoating, 1 coat porcelain enamel. Hardwood floors paste filled; woodwork and floors to be sanded with No. 00 paper between coats.

Radiators 2 coats radiator paint. Interior walls sized and wall papered with Thibaut paper.

Exterior brickwork, including chimney, 2 coats of white brick paint as manufactured by Minwax Co. of N.J.

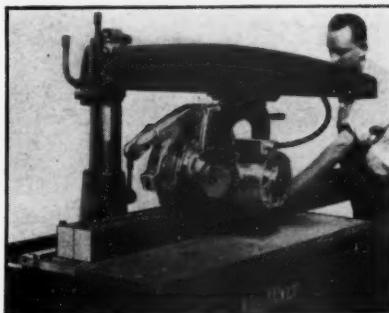
Model Open Specifications

(Continued from page 76)

tion and to the satisfaction of the owner. Slater shall see that the roof is properly stripped before proceeding with this work. The contractor shall furnish a written guarantee for a period of five years.

TILE ROOFING—Cover roof as shown on plans with roofing tile according to the manufacturers' specifications. Provide ridges, finials, copings, etc., in a complete workmanlike manner. None but skilled mechanics shall do this work. Rooper shall see that roof is properly laid and wood strips in proper position before proceeding with this work. The contractor shall furnish a written guarantee for a period of ten years.

COMPOSITION ROOFING—This contractor must see that the entire roof sheathing surface and all wall strips for gutter flashing have been properly and securely set in place. He must make certain that all brick and stone masons have completed the top of all walls so that the roof will not be used as a work platform after the felt has been laid. Cover the entire roof surface with a four-ply tar and gravel roof composed of best tar roofing felt well cemented together and to sheathing board with hot tar so laid that there will be a thickness of four layers in all places well flashed along walls and when nailing is required, nail with 4d nails and tin washers. Cover the entire felt surface with a thick layer of hot tar even flowed on and coarse clean gravel which must be thoroughly dry and spread on the tar before it gets cool. All this (Continued to page 120)



DeWalt machines rip, cut-off, miter, and bevel, all from one side of the table. 29 operations on one machine.



25% PROFIT

You pay for a DeWalt whether you own one or not. One owner says "One job estimated to cost \$6,000. I completed for \$3,842.—on the next job I cut my estimate and that led to more business." Since you are paying the price of a DeWalt in actual work you may as well own a DeWalt.

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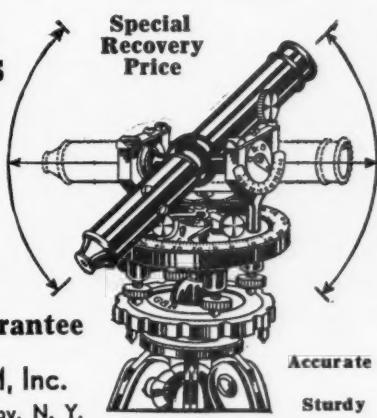
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NO-D-K has four times the killing strength of pure carbolic acid and its power to protect against termites and the fungi of decay is readily apparent. At the same time, NO-D-K has the unusual advantage of not burning the skin. It may, therefore, be used with perfect safety.

With its many obvious advantages, NO-D-K is attractively priced. It may be economically used to protect all kinds of exposed wood now in place, such as barns, warehouses or trestles, or it may be successfully used on the foundation timbers, half-timbers or other woodwork of buildings under construction.



King and Queen Termites. Courtesy U.S. Dept. of Agriculture.



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Send now for our free sixteen-page booklet entitled "Preservation with NO-D-K". It gives valuable suggestions for decay and termite protection. It explains how to treat the various types of construction with little expense. You will find this preservation guide will be of considerable help. Send us the coupon below and your copy of this valuable booklet will be sent promptly.

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Send at once your booklet, "Preservation with NO-D-K".

Name.....

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Model Open Specifications

(Continued from page 118)

work must be done by expert roofers and must when completed be perfectly water tight and to the satisfaction of the owner and the contractor must furnish a written satisfactory guarantee to the owner to keep the roof in a perfect water tight condition for a period of five years from the completion of the work.

SHEET METAL—Gutters and Down Spouts:—Gutters shall be detailed without pitch. Provide and place outlets and mitres as needed. Support outer side of gutter with metal straps on roof every three feet. Down spouts shall be corrugated and approximately three inches in diameter. Down spouts shall be approximately 10 foot lengths and joints shall be lapped turn inside and outside and well soldered. Slip joints shall be provided in gutter and conductor. Down spouts shall be fitted in drain tile and joints shall be neatly cemented up. Down spouts shall be held clear of wall by metal hooks; a wire strainer shall be provided where water enters down spout. All the above sheet metal shall be

Flashing:—Whenever vertical surfaces of any kind intersect the roof the joints shall be carefully flashed. Where vertical surfaces are stucco the flashing shall form a stopping bead for the stuccoing. Where flashing occurs against brick, the flashing shall be let into a brick joint and the joint pointed with elastic mortar. Rib flashings shall be 8 inches wide lapped and soldered. Flashing shall be

METAL ROOFS:—Metal roofs where shown on plans shall be laid over rosin sized paper. Seams shall be locked, standing seams soldered. Form drip at edge of eaves.

VENTS AND CHUTES:—Place No. 24 gauge galvanized iron vents in kitchen and for clothes chute lining as may show on plans.

GUARANTEE:—The contractor shall guarantee all of the above work for a term of five years from the date of completion and acceptance of the work. Such guarantee to protect the owner against all defects in material or workmanship. If any such defects develop this contractor shall make all necessary repairs without cost to the owner.

TILE WORK—INTERIOR

SCOPE OF WORK:—This shall include tile floors for... Tile base in... and tile wainscot in...

MATERIALS:—Floor tile for... Tile base for... shall be... Tile wainscot for... shall be... including

Bull nosed jamb, shall be standard 4x4... glazed. Shall be... high except over the tub, which shall be... high, with molded cap. All walls to receive tile shall first be covered with metal lath.

TILE FLOORS:—Over the entire surface to be covered this contractor shall first lay a thickness of heavy asphalt saturated building felt, same shall be lapped at least two inches and turned up at walls two inches.

CONCRETE SETTING BED:—This contractor shall install over the building paper as specified above a concrete setting bed consisting of one part portland cement to two parts sand and four parts gravel, into which there shall be imbedded a layer of 2"x2" mesh No. 12 gauge wire reinforcing. Concrete setting bed shall be brought up to a point sufficiently below the finished floor line to allow for the tile and a $\frac{1}{2}$ " thick mortar setting bed.

MORTAR SETTING BED:—The concrete setting bed shall be thoroughly saturated before applying the mortar setting bed. Mortar for setting bed shall consist of 1 part cement to 3 parts sand and shall be not less than $\frac{1}{2}$ " thick. Mortar setting bed shall be laid just before tile is laid.

SETTING TILE:—The setting bed shall be dusted with dry cement before setting the tile. The tiles shall be placed upon and firmly pressed and tamped into the mortar, until exactly true and even surfaces even with the finished floor line are obtained. All joints shall be grouted with portland cement grout. All surplus grout shall be removed and the faces of tile left clean.

PROTECTION:—After being cleaned, the floor shall be closed to traffic until the tiles are firmly set. All completed tile work shall be turned over in a clean condition.

PREPARATION OF SURFACE:—This contractor shall apply to the surfaces to be tiled a scratch coat of mortar mixed in the proportions of one part portland cement to three parts sand with hydrated lime added at the contractor's option not to exceed 10% of the volume of the cement mortar. The scratch coat shall be at least $\frac{1}{2}$ " thick and shall be brought to true and even surfaces. While still plastic the scratch coat shall be deeply scored horizontally.

SETTING:—Wainscot must be set in neat manner to make a finished job with true and even surfaces. Tile shall be set on a thoroughly dampened scratch coat. Use setting mortar composed of three parts sand to one part cement with 1/10 part hydrated lime.

CLEANING:—Upon completion of the various portions of his work, the tile contractor shall remove all unused materials, rubbish, etc., in connection with this contract and shall give the tile work a thorough cleaning at completion.

PAINTING AND GLAZING

SCOPE OF WORK:—This branch of work shall include the finishing of all wood trim both interior and exterior and the finishing of all wood floors, the enameling of plaster surfaces in the kitchen, bath and lavatory and the painting of all iron work and all of the glazing.

MATERIALS:

Exterior paint shall be... Exterior stain shall be... Interior stain shall be... Interior varnish shall be... Floor varnish shall be... Spar varnish shall be... Enamel shall be... Metal preservation paint shall be... Paste wood filler shall be... Shellac shall be...

Putty as used herein under painting shall consist of whiting with basic carbonate white lead mixed with pure, raw linseed oil.

OUTSIDE WOOD WORK:—All outside wood work such as... shall be painted. All shall be given a priming coat of paint directly after erection. Nail holes and imperfections shall be neatly puttied before finish coats are applied. Two finish coats in color as selected shall be applied after all other work is completed. Particular care being taken not to apply any coat until the remaining coat is dry. No painting of any exterior work in wet or freezing weather will be permitted. All outside wood work such as... shall be stained three coats of creosote stain. Front door shall be...

INTERIOR WORK:—The painter must see that all work is in proper condition to receive the first coats before proceeding with the work. The following rooms and work shall be painted, varnished, stained or enameled as specified below:

Living Room and...
Dining Room and...
Chambers and...
Bath and Toilets and...
Kitchens and...
Entries and...
Main Stairway...
Other Stairways...
Plaster Walls in...
Closets...
Floors...

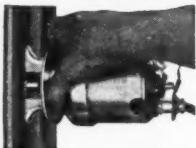
(Continued to page 122)

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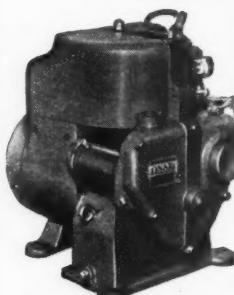
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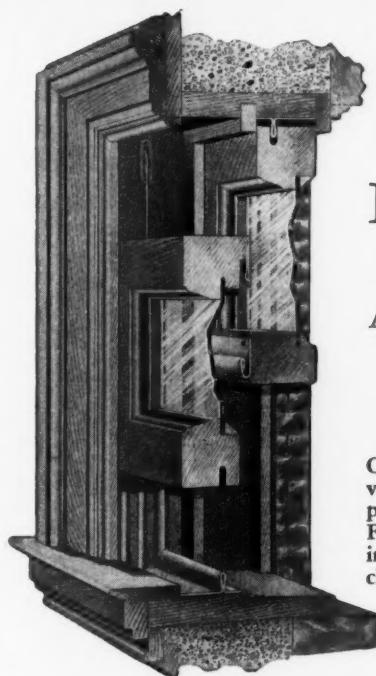
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Apartment Hotels of Today. Sexton. \$18.00. Concrete Design and Construction. Webb and Gibson. \$2.50. Materials and Methods of Architectural Construction. By Gay and Parker. \$6.00. Architects and Builders Handbook. Kidder and Nolan. \$8.00. Applied Architectural Drawing. Abercrombie. \$2.00.

Structural Engineering. Kirkham. \$5.00. Architectural Graphic Standards. Ramsey and Sleeper. \$6.00. Modern Practical Stairbuilding and Hand-railing. Ellis. \$7.50. Timber Design and Construction. Jacoby. \$4.50. Lumber and Its Uses. Kellogg. \$4.00. Air Conditioning. Moyer and Fitts. \$4.00.

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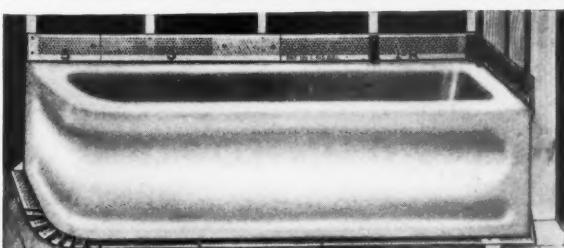
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Model Open Specifications

(Continued from page 120)

INTERIOR PAINT WORK:—All interior work which is to be painted unless otherwise specified shall receive a priming coat composed of white lead, pure linseed oil, turpentine or flattening oil and drier as well as two additional coats of the same white lead paint.

INTERIOR ENAMEL WORK:—Apply three coats of paint as specified for interior paint work, then apply two coats of enamel.

INTERIOR VARNISH WORK:—All inside wood work which is to be varnished shall be stained and filled as soon as delivered to building and all oak floors shall be filled as soon as laid and properly smoothed by carpenter. All oak and porous wood shall be filled with paste filler in colors as selected. All other wood work shall be filled with

Over all filled wood work and trim apply two coats of varnish. Over floors and main stair treads apply two coats of floor varnish. Allow 48 hours between coats. All shellac and varnish to be well rubbed between coats. Over all other wood work not specified apply

MISCELLANEOUS WORK:—The interior of cabinets and drawers, trays, closet shelves and pulley stiles of windows and all other like items shall be filled with two coats of linseed oil, brushed on.

METAL WORK:—All miscellaneous steel and iron work such as cast iron doors, fireplace equipment, wrought iron ornaments, steel sash and all similar items shall be given two coats additional to the priming coat of metal protective paint same to be in colors as selected.

At the completion of the work contractor shall remove all varnish or paint spots and blemishes that may have accumulated on the work of other contractors and leave such work in the same condition as he found it. Any paint work which becomes marred or which develops imperfections shall be refinished by this contractor.

GLAZING:—Measurements shall be taken at the building and this contractor shall be responsible for accuracy of such measurements and for the fit of the glass. Approximate sizes for glass are shown on elevations. All glass except in doors shall be set in putty. Such glass shall be back puttied and set with glazier's points or hooks and then shall be face puttied brought out even to the width of the rabbet. Glazed doors shall be provided with glazing mould. Glass in these locations shall be bedded in putty and the mould securely set with screws.

Putty used for glazing shall be approved putty used for glazing steel sash.

Cellar Sash to be glazed with.....	glass.
Attic Sash to be glazed with.....	glass.
Sash over 24"x24" in size to be glazed with.....	glass.
.....quality of.....
Sash less than 24"x24" in size to be glazed with.....	glass.
.....quality of.....
Steel Sash to be glazed with D. S. A. glass.	glass.
Glass of less thickness shall not be used. Glaze according to the manufacturer's specifications.	
Front Door to be glazed with.....	glass.
.....quality of.....
Rear Door to be glazed with.....	glass.
Grade Door to be glazed with.....	glass.
.....quality of.....
Sash Doors to be glazed with.....	glass.
.....quality of.....
French Doors to be glazed with.....	glass.
.....quality of.....
Plate Glass.....	glass.
for.....	
Art Glass to be set in and cost.....	per square foot.
Florentine Glass.....	for.....
Miscellaneous.....	

This contractor shall protect all glass installed by him. All glass broken as a result of this contractor's failure to properly protect it shall be replaced by him at his own expense.

ELECTRICAL WIRING

SCOPE OF WORK:—This contractor shall provide all labor and material necessary to install the electric wiring complete as shown on plans and as herein specified.

CODE RULES:—All work shall be done in accordance with the rules of the National Electric Code, and any local department having jurisdiction. All necessary certificates to be obtained by contractor at his expense.

No materials shall be used in any part of the work except those that have been approved by the National Board of Fire Underwriters and having their stamp shown plainly on them.

GUARANTEE:—The contractor shall guarantee to make good any defects in the wiring system that shall develop within one year from date of acceptance, due to faulty materials or poor workmanship.

WIRING SYSTEM:—This shall be as selected by owner or as dictated by the construction and the rules of local departments having jurisdiction.

FIXTURES, APPLIANCES, ETC.:—All shall be as approved by owner and a list of same to be furnished shall be attached to contract.

PLUMBING

SCOPE OF WORK:—This contractor shall provide all labor and material and fixtures necessary to install the waste and sewage system, water and supply system complete as shown on plans and as herein specified.

CODE RULES:—All work shall be in strict accordance with all city or state laws, ordinances, etc., and in every case in accordance with the standard of first-class construction.

MATERIALS:—All materials shall be the best of their respective kinds.

FIXTURES, APPLIANCES, ETC.:—All fixtures and appliances shall be as approved by owner and a list of same with a detailed description shall be made a part of contract.

GAS FITTING:—The owner will notify gas company and provide for bringing the main into building. He will also give location of gas outlets as desired. Contractor shall provide and run pipes from the supply of gas to each outlet all of a sufficient capacity to give ample supply and all shall be put in in accordance to rules and regulations of gas company. All pipes to be properly fastened and secured. Locate meters where directed or shown. Contractors shall furnish owner a certificate of inspection by gas company. Any and all gas fixtures shall be furnished by the owner and shall be installed by the contractor.

GUARANTEE:—This contractor shall guarantee to make good any defects in the plumbing system that shall develop within one year from date of acceptance due to faulty materials or workmanship.

HEATING

HEATING SYSTEM:—The heating system shall be as selected by owner, and installed in accordance with specifications and the highest standard of good practice in heating design.

The contractor shall furnish the owner with a copy of heating layout showing the complete system, together with a description of all parts and appliances. This layout and description shall form a part of the contract after being approved in writing by the owner.

GUARANTEE:—This contractor shall guarantee the system installed to heat all rooms in this house to 70 degrees Fahrenheit when the outside temperature is 10 degrees below zero.

This contractor shall also guarantee to replace or make good any part of heating equipment which shall become defective within one year from date of acceptance, due to faulty material or workmanship.

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Latest Information—INDEXED

Selected List of Manufacturers' Literature

For the Service of Builders, Contractors, Architects and Dealers

THE publications listed in this 13-page section are the most important of those issued by leading manufacturers identified with the building industry. They may be obtained without charge either by using the coupon on page 136, listing the numbers of the catalogs desired and mailing to AMERICAN BUILDER, 105 West Adams Street, Chicago, or by applying on your business stationery to the manufacturers direct, in which case kindly mention this publication. Either the titles or the numbers may be used in ordering. This list is an editorial feature maintained for the convenience of our readers.

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3. MASONRY MATERIALS.	13. FLOOR AND WALL TILE, LINO-	23. ELEVATORS.
4. CONCRETE MATERIALS.	LEUM, RUBBER, ETC.	24. POWER PLANT.
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6. ROOFING MATERIALS.	15. PAINTING AND FINISHING.	26. INSULATION.
7. STEEL AND IRON.	16. GLASS AND GLAZING.	27. ACOUSTICS.
8. COPPER, ZINC, ALUMINUM.	17. HARDWARE.	28. FINANCING.
9. METAL DOORS AND WINDOWS.	18. GARAGE DOOR SETS.	29. CONTRACTORS' EQUIPMENT.
10. FURRING AND LATHING.	19. PLUMBING.	30. MECHANICS' TOOLS.
	20. HEATING AND VENTILATING.	31. SPECIAL SERVICES.

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Ashlar, Concrete	Brick Work	Clothes Chutes	Cut-Outs, Electrical
B ATHROOM Fixtures	Bridging, Steel	Coal Burners, Automatic	D AIRY Barn Equipment
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I. MODERNIZING MATERIALS.

ARKANSAS SOFT PINE BUREAU, Boyle Bldg., Little Rock, Ark.

1—New Woodwork—"New Interiors for Old"; 12 pages of descriptive text, half-tone plates of installations and detailed work sheets for three designs of paneling in clear and knotty stock.

THE BARBER ASPHALT Co., Philadelphia, Pa.

2—Shingles, Asphalt—"New Beauty for Your Home," a 16-page four-color folder illustrating and describing Genasco Sealbac individual and strip shingles for re-roofing.

THE BARRETT Co., New York City
3—Shingles and Siding Materials—"What They Did You Can Do!"; information for property owners and builders for spring re-roofing and re-siding business.

BRADLEY LUMBER CO. OF ARKANSAS, Warren, Ark.

4—Block Design Floors—"Architects' Reference Bulletin A-3," complete illustrated specifications for applying "Corner-Lock" block design floors of Oak and Beech. Useful both for new and remodeling work.

Brick-like Siding of Asphalt—The Barber Asphalt Co.—See item No. 34.

THE PHILIP CAREY Co., Lockland, Cincinnati, O.

5—Siding and Roofing Materials—Information regarding the Philip Carey line of roofings and sidings for remodeling and re-styling old buildings.

THE CELOTEX Co., Chicago, Ill.
6—Celotex Finish—"Adventures in Remodeling" presents the insulating and decorative possibilities of Celotex, transforming waste attic space into bedrooms, nurseries, dens, etc.; replacing useless basements into game rooms, recreation rooms, libraries; insulating garages and farm buildings; building vacation cottages.

COLORCRETE INDUSTRIES, INC., 500 Ottawa Ave., Holland, Mich.

7—Colorcrete Stucco Spraying Machine—"Money in Renovizing Homes and Masonry Structures," a 4-page folder describing the Colorcrete renovizing process with examples and cost data on actual work.

THE INSULITE Co., Minneapolis, Minn.

8—Insulite Remodeling—"How to Solve Several Modernizing Problems with One Material at One Low Cost," a profusely illustrated folder containing actual pictures of representative Insulite jobs, that speak for themselves.

JOHNS-MANVILLE CORP., New York City

9—J-M Remodeling Materials—"101 Practical Suggestions for Home Improvements, 1935 Edition," a 28-page book describing J-M materials used in remodeling, and illustrating many before and after examples.

10—Bric-side Asphalt Shingles—"J-M Bric-side Asphalt Shingles," a 4-color folder describing asphalt siding shingles which have a real brick appearance, to be applied over old siding.

11—Insulating Board—"Let's Fix Up Our Home"; folder illustrating applications of J-M insulating board for home improvements.

12—J-M Steeltex—"New Values for Old Homes"; how to use Steel-tex in home modernizing.

Kolorite Stained Shingles—Twin City Lumber and Shingle Co.—See item No. 100.

MASON 2" BRICK VENEER Co., 3255 Goldner St., Detroit, Mich.

13—Brick Veneering—"Your Home Before and After," a 24-page book showing "Mason Patented Beam Foundation" for veneering old frame and stucco houses with 2" brick. Ten sets of pictures are shown of houses before and after veneering with 2" brick.

MEDUSA PORTLAND CEMENT Co., Cleveland, O.

14—Dry Basements—"How to Make Basements Dry," an 8-page pamphlet on this important subject.

PITTSBURGH PLATE GLASS Co., Pittsburgh, Pa.

15—Carrara Structural Glass—"Personality Bathrooms and Character Kitchens," a most beautiful style booklet in full colors, 16 pages and covers, illustrating the new vogue in bathroom and kitchen style, to be built into old homes or used when building new.

16—Store Front Transformation—"How Modern Store Fronts Work Profit Magic"; 24-page portfolio of retail shops and stores of every sort illustrated before and after modernizing with Carrara structural glass and other Pittsburgh Plate Glass Co. store front products. Cost figures are given.

RED CEDAR SHINGLE BUREAU, 4408 White Bldg., Seattle, Wash.

17—Red Cedar Shingles—"Over-Walling"; leaflet to promote the sale of Red Cedar shingles for side walls. Contains detailed instructions for contractors, carpenters and builders for over-walling with Red Cedar shingles.

THE RUBEROID Co., 500 Fifth Ave., New York City

18—Asbestos Siding—"Residing for Permanency," a folder explaining the many advantages of the Eternit Colonial Timber-tex siding, a wood textured asbestos cement siding. Actual homes resided with Colonial are illustrated.

STARLINE INC., Harvard, Ill.

19—Barn Remodeling—"How Old Barns Can Now Make Money," information regarding the remodeling and re-equipping of barns and stables.

UNITED STATES PLYWOOD Co., 603 W. 36th St., New York City

20—Decorative Wood Wallpaper—"Flexwood"; information regarding this thin wood mounted on cloth and made flexible for direct wall application.

UNIVERSAL ATLAS CEMENT Co., Chicago, Ill.

21—Stucco Over-coating—"Remodeling with Stucco," a 24-page booklet containing numerous before and after views of structures remodeled with stucco; also specifications, working data, etc., connected with the use of Atlas white portland cement.

Stained Shingles—Weatherbest Corp.—See item No. 22.

WEATHERBEST CORP., North Tonawanda, N.Y.

22—Shingled Walls—"Modern Miracles Can Be wrought by Weatherbest Stained Shingles," a beautifully illustrated book showing the possibilities of reclaiming and restyling old homes by over-coating with stained shingles. Many practical points of design and construction.

WEYERHAEUSER SALES Co., St. Paul Minn.

23—Modernizing Helps—"Budgeted Home Modernization," a well illustrated handbook on all home modernizing construction problems.

2. LUMBER AND MILLWORK.

AMERICAN CREOSOTING Co., Louisville, Ky.

24—Timber Preservation—Information and helpful data on use of creosoted wood in residences and other buildings. Also how to protect lumber against termites.

ANDERSEN FRAME CORP., Bayport, Minn.

25—Casement Windows—"Andersen Casement Window"; 6-page folder with architectural details, table of sizes and complete description.

26—Narroline Double Hung Window—"Andersen Narroline Double Hung Window," an illustrated folder with architectural details and complete description.

27—Basement Windows—"Andersen Complete Basement Window," a circular with details and complete description of sash, frame and hardware.

28—Window Frames—"Andersen Master Frames"; illustrated folders and architectural details showing frame installations, leakproof, lock sill construction and complete information.

ANGELINA COUNTY LUMBER Co., Kelty, Tex.

29—Lumber—Information regarding Southern Short Leaf Pine and Southern hardwood furnished through the retail lumber dealer.

ARKANSAS OAK FLOORING Co., Pine Bluff, Ark.

30—Oak Flooring—Information, including attractive new data book, on "Perfection" Brand Oak Flooring.

ARKANSAS SOFT PINE BUREAU, Boyle Bldg., Little Rock, Ark.

32—Mouldings—"8000 Moulding Series and Handbook"; 64 pages on Arkansas Soft Pine trim and moulding, including essential data, profiles of all standard mouldings including AIA special supplement.

33—Grading Rules—Arkansas Soft Pine Grading Rules, 78 pages of special interest to lumber dealers, planing mills and specification writers.

THE BARBER ASPHALT CO., Philadelphia, Pa.

34—Sidings, Asphalt—"Genasco Double Dip Tru-Brick Siding," a 16-page four-color folder illustrating and describing brick-like siding.

BRADLEY LUMBER CO. OF ARKANSAS, Warren, Ark.

35—Block Design Flooring—"Bradley Presents a New Creation in Block Design Flooring," a big illustrated broadside in full color showing how to apply block flooring and illustrating numerous ornamental flooring patterns.

36—Nail-Seated Flooring—A circular giving information regarding Bradley flooring which is "Nail-Seated," which makes it easier for the floor layer to get a good job.

THE CELOTEX CO., Chicago, Ill.

37—Celotex Finish—"Planning Modern Interiors with Celotex" presents 85 drawings of wall and ceiling designs and 50 photographs with descriptions of application, divisional treatments, beveling, grooving, carving, painting, decorating, etc. This valuable handbook obtainable only at your Celotex dealer.

DIERKS LUMBER & COAL CO., Kansas City, Mo.

38—Interior Trim and Flooring—"Beautiful Interiors," a 16-page booklet discussing products entering into the interior construction of homes. Contains instructions for finishing woodwork.

39—Log Cabin Siding—"Dierks Log Cabin Siding"; broadside containing photographic examples of the use of this material. Also two architects' drawings with floor plans.

40—End Matched Pine Flooring—"End-Matched-Endless"; folder on end matched pine flooring, discussing its economies and desirability.

FORDYCE-CROSSETT SALES CO., 80 E. Jackson Blvd., Chicago, Ill.

41—Wolmanized Arkansas Soft Pine—Information regarding this line of lumber which is certified as to protection against decay and termites; also fire retardation to a marked degree.

FROST LUMBER INDUSTRIES, INC., Shreveport, La.

42—Lumber, Wholesale—Information on Frost Yellow Pine and Hardwood lumber, furnished through retail lumber dealers.

HARBOR PLYWOOD CORP., Hoquiam, Wash.

43—Waterproofed Plywood—"Data on Harbord Super Plywood"; Bulletin No. 3—1935 series, is a 12-page illustrated folder showing how this waterproofed panel is manufactured and how it is used in building construction and for many industrial and handcraft uses.

44—Harbord Sag-Nott Doors—"Harbordata Bulletin No. 1"; 4-page bulletin describing the advantages of the Cotte Keyed joint construction.

HASKELITE MANUFACTURING CORP., Chicago, Ill.

45—Phemaloid Compound Lumber—"Livable Homes Made with Phemaloid Compound Lumber"; details of G. R. Meyercord's building construction for prefabricated houses, using a double wall of Phemaloid panels. 7 pages, illustrated.

46—Waterproof Plywood—"Phemaloid Compound Lumber," a 4-page folder giving tests of this waterproof plywood, and suggesting many uses.

HUTTIG MFG. CO., Muscatine, Ia.

47—Red-E-Fit Windows—"Eight Reasons," a 6-page detailed circular on the Huttig Red-E-Fit rot proof window guaranteed for 25 years against rot and decay. Sash can be used in any standard frame.

48—Waterproof Glued Doors—"Huttig Woodwork in Our Nation's Capital"; a beautifully illustrated 28-page catalog presenting the Huttig line of doors and millwork as used in Washington.

THE INSULITE CO., Minneapolis, Minn.

49—Insulite Board—"Insulite Specifications and details"; 16 pages of detailed instructions covering the application and use of Insulite in building practice.

JOHNS-MANVILLE CORP., New York City

50—J-M Hard Board—"The Building Material of Unlimited Uses," an illustrated brochure suggesting numerous applications for the versatile J-M Hard Board.

MAPLE FLOORING MANUFACTURERS ASSN., Chicago, Ill.

51—Maple, Beech & Birch Floorings—"Heavy Duty Finishes for Maple Flooring," a 6-page illustrated folder on approved finishes especially adapted to Maple floors given hard surface.

MICHIGAN - CALIFORNIA LUMBER CO., Camino, Calif.

52—California Pine—"Facts About Sugar Pine," a folder giving qualities and uses of Sugar Pine lumber.

THE READYBUILT PRODUCTS CO., Baltimore, Md.

53—Repex Wall Paneling—Information regarding this reproduction of old ornate hand carved wall paneling.

Screen Mouldings—W. J. Dennis & Co.—See item No. 184.

Timber Joint Connectors—Timber Engineering Co.—See item No. 196.

UNITED STATES PLYWOOD CO., 603 W. 36th St., New York City

54—Plywood—"The Plywood Book," profusely illustrated, covers entire subject including technical data, how to erect, and suggestions for use. Price supplement included.

WESTERN PINE ASSN., Portland, Ore.

55—Western Pine—4-page folder for architects and contractors.

56—Sugar Pine—Grades and recommended uses.

57—Ponderosa Pine—Properties, uses and grades, an 80-page illustrated manual.

58—Idaho White Pine—Its properties, uses and grades, a 64-page illustrated manual.

WEYERHAEUSER SALES CO., St. Paul, Minn.

59—End Matched Lumber—"Better Construction and Lower Cost" are featured in new informative bulletin describing the Weyerhaeuser Endless Lumber and how to use it.

59A—Farm Building Plans—"Better Farm Buildings" are described in a new 24-page handbook showing numerous designs and details.

59B—Finding the Prospects—"A Plan for Locating Home Building Prospects" is offered to 4-Square dealers and their co-operating building contractors.

WOOD CONVERSION CO., St. Paul, Minn.

60—Decorative Panel Boards—"Pace Making in Decoration," a folder describing Nu-Wood for walls and ceiling.

61—Tuff-Wood Hard Board—"For Any Hard Board Use," a circular illustrating the many uses of this material.

3. MASONRY MATERIALS.

W. E. DUNN MFG. CO., Holland, Mich.

62—Brick Manufacturing—"4 Keys to Success in the Building Industry"; descriptive booklet pointing out opportunities open today in every city. Data sheets describe brick machine which makes a new light weight, lower cost brick by automatic line production.

MEDUSA PORTLAND CEMENT CO., Cleveland, O.

63—Waterproofed Masonry Cement—"Medusa Mix," a 4-page circular.

64—Mortar Cement—"Medusa Stoneset Cement"; information folder on this non-staining waterproofed mortar cement.

LOUISVILLE CEMENT CO., INC., 300 Mortar, Louisville, Ky.

65—Mortar—"Facts about Brixment," a 17-page illustrated booklet giving a clear, concise explanation of requirements for good mortar, and how Brixment meets these requirements.

PORLAND CEMENT ASSN., 33 W. Grand Ave., Chicago, Ill.

66—Concrete Masonry—"Concrete Masonry Construction"; 48 pages, illustrated; construction manual giving details and specifications covering concrete block, building tile, roofing tile, chimneys, concrete floors and portland cement stucco.

67—Concrete Ashlar—"Concrete Ashlar Walls"; 16 pages, illustrated, featuring concrete masonry units to develop attractive walls for interiors and exteriors.

68—Artificial Stone—"Walls That Whisper Happy Living," a folder illustrated with color plates to show inside and outside walls of concrete ashlar. A variety of patterns, textures and colors demonstrate attractive finishes. 2" Brick Veneering—Mason 2" Brick Veneer Co.—See item No. 13.

4. CONCRETE MATERIALS.

HARBOR PLYWOOD CORP., Hoquiam, Wash.

69—Harbord Super Plycrete—"Harbordata Bulletin No. 4," a 4-page bulletin giving detailed information in regard to the use of plywood as concrete form material.

JOHNS-MANVILLE CORP., New York City

70—Cement Asbestos Siding—"J-M Cedargrain Asbestos Siding Shingles," a folder describing the new, attractive, permanent and fire-resistant J-M asbestos cement siding shingles.

MEDUSA PORTLAND CEMENT CO., Cleveland, O.

71—Concreting Handbook—"Concrete Work Made Easy"; 24-page vest pocket booklet of data for contractors on concreting problems.

72—Medusa White—"Medusa White Portland Cement and Its Many Uses," an illustrated folder.

PORLAND CEMENT ASSN., 33 W. Grand Ave., Chicago, Ill.

73—Construction Manual—"Concrete Facts for Concrete Contractors"; 48-page illustrated manual on modern methods for making quality concrete. Gives facts on selection of materials, proportioning, mixing, placing, finishing and curing, colored concrete, special surface finishes, forms, reinforcements, watertight concrete and cold weather construction.

74—Concrete Floors—"Concrete Floors for Residences"; 28 pages, illustrated. A manual of residential floor construction, describing solid slab, ribbed, tile and joist, and precast concrete joist floors. Discusses form construction, surface treatments, and coverings.

75—Precast Joists—"Precast Concrete Joists"; 16 pages, illustrated with construction details and loading tables for precast joist concrete floors. Gives framing details and typical specifications.

Terrazzo Floors—Universal Atlas Cement Co.—See item No. 159.

5. WATERPROOFING.

MEDUSA PORTLAND CEMENT CO., Cleveland, O.

76—Waterproofed Concrete—"How to Make Good Waterproofed Concrete," a 32-page brochure, well illustrated, containing many formulae and instructions for the use of Medusa waterproofed portland cement.

6. ROOFING MATERIALS.

THE AMERICAN BRASS CO., Cook St., Waterbury, Conn.

77—Electro-Sheet Roofing—"Anaconda Electro-Sheet for Built-up Roofing," a 12-page illustrated booklet describing how the use of thin copper sheets with alternate layers of asphalt provides a more durable type of built-up roof.

AMERICAN SHEET AND TIN PLATE CO., Pittsburgh, Pa.

78—Corrugated Roofing and Siding—"Better Buildings," a 32-page booklet describing corrugated sheets and formed roofing and siding products for rural and industrial fields.

79—Roofing, Tin—"Copper—Its Effect Upon Steel for Roofing Terne Plates," a 28-page booklet describing Keystone copper steel roofing terne plates for modern construction.

THE BARBER ASPHALT CO., Philadelphia, Pa.

80—Asphalt Materials—"Propaganda vs. Facts," a 12-page booklet illustrating and describing the advantages of asphalt shingles made with the "Slam-Test" coating.

81—Shingles, Asphalt—"Genasco Latite Shingles," a 16-page four-color folder illustrating and describing the advantages of these shingles which are locked together on the roof.

82—Shingles, Asphalt—"Genasco Barb-Lock Asphalt Shingles," a 16-page four-color folder illustrating and describing these shingles which are laid by the Dutch Lap method.

83—Shingles, Strip—"Genasco Hexagon Strip Shingles," a 16-page four-color folder illustrating and describing various types and sizes of hexagonal shingles.

THE BARRETT CO., New York City

84—Asphalt Shingles and Roll Roofings—An assortment of attractive folders giving full information on asphalt shingles and roll roofings in various colors, weights, etc.

85—Built-Up Roofing—"Architects and Engineers Reference Manual," a 70-page book treating with built-up roofing, waterproofing, damp-proofing, flashing and roof drainage. Detailed drawings on various methods.

THE PHILIP CAREY CO., Lockland, Cincinnati, Ohio

86—Insulated Shingle—Information regarding the Carey Cork Insulated Shingle with demonstration of its insulating value.

THE CELOTEX CO., Chicago, Ill.

87—Roof Insulation—"Celotex Vapor-proofed Roof Insulation," a 4-page folder presenting this new line of products.

W. E. DUNN MFG. CO., Holland, Mich.

88—Roof Tile Making Machines—"Chain Manufacturing," a valuable booklet giving complete information on the industry, the equipment, the production costs, etc., manufacturing cement roofing tile. Data sheets give full information relative to automatic line production equipment for manufacturing roofing tile in 30 colors and shades of permanent material.

THE EDWARDS MANUFACTURING CO., 401 Eggleston Ave., Cincinnati, O.

89—Metal Roofing—"Edwards Sheet Metal Products, Catalog 85"; 60 pages of drawings and data showing plain corrugated, interlocking "V" crimp, standing seam sheet roofing, metal shingles, metal tile unit roofing, eaves trough, conductor pipe, etc.

FILSHIE LEAD HEAD NAIL CO., INC., Chicago, Ill.

90—Lead Headed Roofing Nails—Information regarding the Filshie Led-Hed nails and fasteners to fasten down corrugated roofing and siding. Data on sizes and number of nails per pound.

JOHNS-MANVILLE CORP., New York City

91—J-M Materials—"The Catalog of Johns-Manville Building Materials," a 36-page 4-color catalog carrying complete description of the J-M building material line.

92—Asbestos Shingles—"Re-Roof for the Last Time," a 4-color folder describing J-M asbestos shingles, giving illustrations of various colors and styles.

93—Asphalt Shingles—"Re-Roof Now While Costs Are Low" describes advantages of re-roofing with J-M asphalt shingles. Four-color illustrations show various colors and blends of asphalt shingles.

94—Built-Up Roofs—"What About Your Roofs," an illustrated brochure fully describing J-M bonded built-up roofing for roof construction and maintenance.

MILCOR STEEL CO., 4111 W. Burnham St., Milwaukee, Wis.

95—Roof Decks, Steel—"Milcor Steel Roof Decks," 4-page illustrated technical folder showing construction details and safe load tables for Milcor roof decks.

NORTH BANGOR SLATE CO., Bangor, Pa.

96—Roofing Slate—"Choose Genuine Bangor Slate for Permanency, Economy and Beauty," an illustrated folder showing standard lay, thatch lay and random lay, together with considerations of durability and economy of slate roofing.

RED CEDAR SHINGLE BUREAU, 4408 White Bldg., Seattle, Wash.

97—Red Cedar Shingles—“Red Cedar Shingles for Homes of Lasting Beauty”; circular designed to promote the sale of Red Cedar shingles on roofs, illustrating method of over-roofing.

THE RUBEROID CO., 500 Fifth Ave., New York City

98—Asbestos Shingles—“Lifelong Roof Protection,” a 4-color folder illustrating Eternit Timbertex, Eternit Gothic and Hexagonal Shingles, and explaining their many advantages to the home owner.

Shingles, Metal—Milcor Steel Co.—See item No. 116.

Stained Shingles—Weatherbest Corp.—See item No. 22.

TRUSCON STEEL CO., Youngstown, O.

99—Steeldeck Roofs—“Truscon Steeldeck Roofs,” a 12-page catalog with complete installation details and loading tables.

TWIN CITY LUMBER AND SHINGLE CO., 2563 Franklin Ave., St. Paul, Minn.

100—Stained Shingles—“Kolorite Stained Shingles for Character in Homes,” an illustrated folder presenting Kolorite process stained shingles. Contractors will find it helpful in developing remodeling work.

7. STEEL AND IRON.

AMERICAN SHEET AND TIN PLATE CO., Pittsburgh, Pa.

101—Galvanized Sheets—“American Galvanized Sheets,” a 24-page booklet describing Apollo Best Bloom and Keystone Rust Resisting galvanized sheets for industrial and construction uses.

102—Stainless Steel Sheets—“USS Stainless and Heat Resisting Steels,” a 48-page booklet describing USS 18-8 and other Stainless Steel products applicable to the building field.

CINCINNATI IRON FENCE CO., INC., 3007 Spring Grove Ave., Cincinnati, O.

103—Iron Railings—“1935 Series Folder” showing artistic designs suitable for new or remodeled homes illustrating interior railings, interior gates, exterior railings, iron fence and gates, iron guard and chain link fence.

THE EDWARDS MANUFACTURING CO., 401 Eggleston Ave., Cincinnati, O.

104—Miscellaneous Iron and Steel—“Catalog 74”; 44 pages of roofings, skylights, ventilators, marqueses, metal doors, metal windows, wire fence, ornamental work, guards, motion picture machine books, theatre equipment, etc.

INTERNATIONAL STEEL CO., Evansville, Ind.

105—Trusses—“Specify International Standard Bowstring Trusses,” an engineering folder giving details and dimensions of a complete line of prefabricated steel trusses.

106—Steel Buildings—“International Steel Buildings for Every Industrial Purpose,” a 12-page catalog of steel buildings for airports, garages, shops and factories of prefabricated steel construction.

107—Steel Ceilings—“International Steel Ceilings and Side Walls,” a well illustrated 36-page catalog of architectural sheet metal work.

Iron Fence and Gates—Cincinnati Iron Fence Co., Inc.—See item No. 103.

JOHNS-MANVILLE CORP., New York City

108—J-M Steeltex—“Reinforced Concrete Floors,” a 27-page technical brochure.

109—J-M Steeltex—“Modern Building Methods,” a 2-color brochure on various applications of Steeltex.

110—Reinforcing—“Steeltex Floor Lath,” information on Steeltex floor lath for concrete and gypsum floor and roof slabs.

KALMAN STEEL CORP., Bethlehem, Pa.

111—Joists, Steel—“Kalman Steel Joists.” This booklet illustrates the uses of such steel joists; also contains drawings, illustrations of safe loads, etc., and pictures of buildings such as hotels, schools, etc., which have used this economical fireproof construction.

GEO. L. MESKER & CO., Evansville, Ind.

112—Steel Buildings—“Mesker Standardized Sectional Steel Buildings,” a circular featuring all-steel construction.

113—Steel Garages—Information concerning construction materials for private and public garage work.

114—Steel Trusses—“Mesker Bowstring Steel Roof Trusses,” an 8-page catalog presenting line of prefabricated steel trusses for roof and other construction.

115—Metal Building Products—“Mesker Store Fronts and Metal Building Products,” a 32-page catalog presenting a large line of steel joists, metal lath, metal doors, skylights, structural steel, wrought iron railings, store front construction, etc.

MILCOR STEEL CO., 4111 W. Burnham St., Milwaukee, Wis.

116—Architectural Sheet Metal—“Architectural Sheet Metal Guide” a reference book of 72 pages on Milcor architectural sheet metal products, containing illustrations, descriptions and specifications on Spanish and American metal tile, metal shingles, roof trimmings, ornamental cornices, ventilators, skylights, marquees, zinc and copper architectural ornaments.

117—Sheet Metal—“Sheet Metal Handbook” a book of 128 pages illustrating, specifying and describing a complete line of sheet metal building products with data on steel, copper, zinc and tin sheets, and directions for applying various forms of sheet metal roofing.

READING IRON CO., 401 N. Broad St., Philadelphia, Pa.

118—Wrought Iron Bars—“Old Hickory,” a description of the process of manufacture and of results obtained by use of genuine puddled wrought iron bars.

H. H. ROBERTSON CO., Pittsburgh, Pa.

119—Keystone Steel Floor—“Robertson Keystone Beam Steel Floor Catalog, KS-1,” a 36-page catalog giving load tables, essential detail drawings of floor, and use with collateral construction.

120—Residential Steel Floors—“Robertson Keystone Beam Steel Floor for Low Cost Housing & Apartment Construction, KS-2,” a 12-page booklet giving details of use of special inverted floor section for housing and apartment construction.

121—Weatherproof Skylights & Sash—“Robertson Skylights Minimize Leakage and Breakage,” an 84-page catalog made up of detail drawings of various types of Robertson Weatherproof Skylights, drawn to scale for convenient drafting room use.

Skylights—Milcor Steel Co.—See item No. 116.

TRUSCON STEEL CO., Youngstown, O.

122—Steel Joists—“Truscon O-T Open Truss Steel Joists,” a 36-page catalog giving complete description, details, specifications and loading tables. Ventilators, Roof—Milcor Steel Co.—See item No. 116.

8. COPPER, ZINC, ALUMINUM.

ALLMETAL WEATHERSTRIP CO., Chicago, Ill.

123—Thresholds, Brass and Aluminum—Information regarding these specialties, offered as part of complete weatherstripping service.

124—Stair Nosings, Brass and Aluminum—Information regarding these specialties.

ALUMINUM COMPANY OF AMERICA, 1820 Gulf Bldg., Pittsburgh, Pa.

125—Aluminum—Information regarding aluminum for architectural and structural uses.

ANDERSEN FRAME CORP., Bayport, Minn.

126—Bronze Weatherstrips—Illustrated folder showing installation and complete description.

Copper Armored Sisalkraft—The Sisalkraft Co.—See item No. 193.

Copper Pipe & Fittings—American Brass Co.—See item No. 205.

Dennis Weatherstrips—W. J. Dennis & Co.—See item No. 184.

Metal Weatherstrips—Accurate Metal Weatherstrip Co.—See item No. 181.

Metal Weatherstrips—Protex Weatherstrip Mfg. Co.—See item No. 188.

MONARCH METAL WEATHERSTRIP Co., 6333 Etzel Ave., St. Louis, Mo.

127—Monarch Metal Weatherstrips—"What Does Weather Cost You?" pamphlet telling of the effect of wind and weather on air conditioning inside the building, and how it can be prevented.

128—Weatherstrip Practice—"It's Always Spring Inside When," a pamphlet illustrating Monarch metal weatherstrips for double-hung windows, wood and steel casements, and doors.

THE KAWNEER Co., Niles, Mich.

129—Store Front Construction—"Store Fronts by Zouri," an illustrated catalog of Zouri store front construction offered by the Zouri division of the Kawneer Co.

Monel Metal Range Boilers—The International Nickel Co., Inc.—See item No. 210.

Monel Metal Sinks—The International Nickel Co., Inc.—See item No. 209.

Ornamental Zinc and Copper—Milcor Steel Co.—See item No. 116.

UNITED STATES PLYWOOD Co., 603 W. 36th St., New York City

130—Metal Covered Plywood—"Armory"; full information concerning metal covered plywood employing all kinds of metal.

9. METAL DOORS AND WINDOWS.

CLAY EQUIPMENT CORP., Cedar Falls, Ia.

131—Barn Windows—Information on line of metal windows for live stock buildings, including open air windows, Air-Flo windows, etc.

CORNELL DOOR WORKS, INC., 3600 13th St., Long Island City, N. Y.

132—Doors, Rolling—"Cornell Rolling Doors," 32-page catalog illustrating various uses for rolling steel doors.

133—Canopy Doors—"Cornell One-Piece Canopy Doors," 12 pages explaining Cornell canopy doors with large detail drawings and illustrations of actual installations.

134—Vertical Lift Doors—"Cornell Vertical Lift Doors"; 2 or 3 telescoping sections folding upward to permit closure of very large openings; motor operated.

INTERNATIONAL STEEL Co., Evansville, Ind.

135—Steel Windows—"Steel Windows by International," a 24-page catalog with photographs, details and schedule of sizes for steel sash for industrial buildings, public buildings and residential structures.

THE KAWNEER Co., Niles, Mich.

136—Rustless Windows—"Better Windows," a 24-page two-color lithographed catalog presenting the Kawneer line of metal windows of non-ferrous construction, including aluminum, brass and nickel silver. The new double-hung and casement windows for homes; also windows for railway, bus and steamship use are presented.

137—Lasting Doors—"Kawneer Rustless Metal Doors," an 8-page booklet with illustrations and details of Kawneer welded tubular and flush type doors, standard and special types.

THE OVERHEAD DOOR CORP., Hartford City, Ind.

138—Overhead Steel Sectional Doors—Information regarding the Overhead Door, steel sectional pattern, for garages, factories, warehouses, filling stations and similar buildings; also for partitions.

TRUSCON STEEL Co., Youngstown, O.

139—Steel Casements—"Truscon Residence Steel Casements, Series 5," a 28-page catalog describing and illustrating steel casements with complete detail data and specifications.

140—Steel Basement Windows—"Truscon Steel Basement Windows," an 8-page folder giving complete installation details and sizes.

10. FURRING AND LATHING.

Celotex Lath—The Celotex Co.—See item No. 258.

JOHNS-MANVILLE CORP., New York City

141—J-M Steeltex—"Steeltex Lathing Details for Plaster Construction," an illustrated brochure.

142—Steeltex Data—"Avoid This!" a 2-color illustrated folder giving facts and data on Steeltex.

MILCOR STEEL Co., 4111 W. Burnham St., Milwaukee, Wis.

143—Metal Lath—"The Milcor Manual," a 90-page catalog of up-to-date illustrations, descriptions and architects' specifications on metal lath, corner beads, screeds, picture molds, expansion casings, metal arches, window stools, metal bases and complete accessories.

144—Metal Casings—"Milcor Expansion Metal Casings," an 8-page circular illustrating and describing an exclusive Milcor product.

TRUSCON STEEL Co., Youngstown, O.

145—Metal Lath—"Truscon Metal Lath Products," a 12-page folder illustrating and describing metal lath products and accessories.

WOOD CONVERSION Co., St. Paul, Minn.

146—Insulating Lath—"Nu-Wood Insulating Lath," a circular demonstrating the uses and advantages of this material.

11. PLASTERING AND STUCCO.

THE EDWARDS MANUFACTURING Co., 417 Eggleston Ave., Cincinnati, O.

147—Modernistic Steel Ceilings—"The Ceiling Distinctive Beautiful Modernistic," an 8-page leaflet showing chain store installation photograph and data on new style ceilings.

MEDUSA PORTLAND CEMENT CO., Cleveland, O.

148—White Cement Stucco—"Medusa White Portland Cement Stucco," a 20-page illustrated brochure of present day stucco practice including textures, finishes and general specifications.

PORLTAND CEMENT ASSN., 33 W. Grand Ave., Chicago, Ill.

149—Plasterer's Manual—A 52-page handbook on portland cement plaster and stucco practice; methods for various textures.

Remodeling with Stucco—Universal Atlas Cement Co.—See item No. 21.

12. MARBLE AND SLATE.

JOHNS-MANVILLE CORP., New York City

150—Asbestos Wainscoting—"Use J-M Asbestos Wainscoting for Colorful 'Tiled' Walls," a folder illustrating asbestos-cement sheets in "tile" and "marbelized" design for home improvements.

MARSH WALL TILE Co., Dover, O.

151—Marshmarble—Leaflet in full color showing reproductions of rare marbles available in fibre sheet form.

THE RUBEROID Co., 500 Fifth Ave., New York City

152—Newtile—"Asbestos Panels Simulating Tile," a 4-color booklet illustrating this new, inexpensive, rigid, fire-proof and easily applied wall tile.

UNITED STATES PLYWOOD Co., 603 W. 36th St., New York City

153—Decorative Panels—"Micarta"; full information regarding this phenolic resin decorative sheet material for panels, walls, table tops, etc.

13. FLOOR AND WALL TILE, LINOLEUM, RUBBER, ETC.

ARMSTRONG CORK PRODUCTS Co., Floor Division, 1218 State St., Lancaster, Pa.

154—Armstrong's Linoleum Floors—"Floors That Keep Homes in Fashion," a beautifully illustrated catalog containing a wealth of ideas for builders.

Asbestos Wainscoting—Johns-Manville Corp.—See item No. 91.

Carrara Structural Glass for Bathrooms and Kitchens—Pittsburgh Plate Glass Co.—See item No. 15.

JOHNS-MANVILLE CORP., New York City

155—Asbestos Flexboard—"The Revolutionary New Building Material, J-M Asbestos Flexboard," fully describes the new asbestos cement sheet, a flexible material that works like wood. Standard and decorative finishes are illustrated.

LLOYD FLOOR & WALL TILE Co., Kansas City, Mo.

156—Ceramic Tile—"Catalog of Floor and Wall Tile"; 56 pages in four colors presenting over 400 separate illustrations of tile for bathrooms, kitchens, vestibules, etc.

MARSH WALL TILE CO., DOVER, O.
157—Marshtile—Information regarding this beautiful fibre sheet tiling for kitchens, bathrooms and commercial uses. Illustrations in full color.

THE TILE-TEX CO., 1229 McKinley Ave., Chicago Heights, Ill.

158—Tile-Tex Floor Tile—“Floors That Endure,” a 12-page catalog describing Tile-Tex and illustrating in actual colors patterns and designs.

UNIVERSAL ATLAS CEMENT CO., CHICAGO, ILL.

159—Terrazzo Floors—“Terrazzo,” a 12-page booklet covering fine terrazzo flooring, with color plates on four actual installations; 24 different color combinations suggested.

WOOD CONVERSION CO., ST. PAUL, MINN.

160—Insulating Tile—“Nu-Wood Bevel-Lap Tile,” a booklet showing the possibilities of this acoustical, insulating, self-colored, tile wall treatment.

14. PLASTIC FLOORS.

15. PAINTING AND FINISHING.

ALUMINUM COMPANY OF AMERICA, 1820 Gulf Bldg., Pittsburgh, Pa.

161—Aluminum Paint—“Aluminum Paint Gives Longer Life” presents aluminum paint specifications and demonstrates its value as a priming coat and as a protective coating for use inside and outside the home.

THE AMERICAN FLOOR SURFACING MACHINE CO., 511 S. St. Clair St., Toledo, O.

162—Floor Treating Material—“American Pentra-Seal,” complete information on new penetrating floor finish which seals the surface and reduces maintenance costs. A finish especially recommended for maple floors.

COLUMBUS COATED FABRICS CORP., Columbus, O.

163—Fabric Wall Covering—“Questions and Answers about Wall-Tex,” a complete description of Wall-Tex, wall canvas with samples and directions for handling.

THE EAGLE-PICHER LEAD CO., Temple Bar Bldg., Cincinnati, O.

164—White Lead—Booklet presenting true story of an Indiana community that decided, because of previous paint failures, to find out for itself “What Is the Best Paint.” Shows results of test through extensive use of actual unretouched photographs.

THE GLIDDEN CO., 11001 Madison Ave., Cleveland, O.

165—Ripolin Q.D. Enamel—Information regarding this glossy enamel in white and 6 selected colors.

166—Speed-Wall—Information regarding this semi-glossy finish which dries in 4 hours.

167—Endurance Paint—Information regarding the Glidden line of ready-mixed paints for house painting and other uses.

THE LOWE BROTHERS CO., 452 E. Third St., Dayton, O.

168—Painting and Decorating Materials—“High Standard Specifications”; 32 pages of specifications for every painting and varnishing situation. May be used by architects and builders verbatim.

MEDUSA PORTLAND CEMENT CO., CLEVELAND, O.

169—Painting Concrete Floors—“How to Paint Portland Cement Stucco, Concrete Floors and Other Masonry Surfaces,” a 20-page illustrated manual of current painting practice in the concrete and masonry field.

PITTSBURGH PLATE GLASS CO., PAINT & VARNISH DIV., PITTSBURGH, PA.

170—Color Suggestions—“How to Work Magic in Your Home with Color,” a beautiful new booklet giving much information on painting and decorating.

THE REARDON CO., 2200 N. Second St., St. Louis, Mo.

171—Washable Kalsomine—“New Kind of Kalsomine” presents full particulars as to washable kalsomine and its uses.

172—Texture Paints—“Plastex Question Mark Bulletin”; complete information as to how various textures may be secured with Plastex.

173—Wall Sealer—“Check it with Chex”; information on wall treatment preparatory to painting and decorating.

TENNESSEE EASTMAN CORP., KINGSPORT, TENN.

174—NO-D-K—Information regarding this remarkable wood preservative for termite and dry rot treatment.

WEATHERBEST CORP., 154 Main St., North Tonawanda, N. Y.

175—Shingle Stain—Color chart and information on Weatherbest Brush-Coat shingle stain, with instructions as to uses and application.

16. GLASS AND GLAZING.

CARRARA STRUCTURAL GLASS FOR BATHROOMS AND KITCHENS—Pittsburgh Plate Glass Co.—See item No. 15.

CLAY EQUIPMENT CORP., CEDAR FALLS, IA.

176—Vita Glass—Information regarding the Clay agricultural Vita Glass, an ultra violet ray transmission glass.

LIBBEY-OWENS-FORD GLASS CO., TOLEDO, O.

177—Glass—Information regarding the complete line of window plate and special glass manufactured by this company.

THE KAWNEER CO., NILES, MICH.

178—Store Fronts—“Kawneer Store Fronts,” is a reference book for architects, contractors, merchants and building owners; 32 pages containing numerous details and photographs.

PITTSBURGH PLATE GLASS CO., PITTSBURGH, PA.

179—Store Front Metal—“Pittco Store Front Metal Offers Cushion Grip on Glass; Armor Resistance, Classic Grace.” Complete details of new glass setting for store front construction.

SCOHY SHEET METAL CO., SISTERVILLE, W. VA.

180—Window Glass—“Thru the Window Glass” describes the process of manufacturing window glass from the raw materials to the finished product packed and ready to ship.

17. HARDWARE.

ACCURATE METAL WEATHER STRIP CO., 216 E. 26th St., NEW YORK CITY

181—Weatherstrips—“Details of Installation,” a portfolio of large size details showing recommended weatherstrip practice for doors and windows.

ALLITH-PROUTY MFG. CO., DANVILLE, ILL.

182—Hangers and Track—“Ten-Ten Watershed Door Hangers and Tracks,” a folder illustrating this line of hardware.

183—Barn Hardware—“Reliable—Pioneer Type Barn Door and Track”; folder presenting full information.

Barn Hardware—National Mfg. Co.—See item No. 187.

W. J. DENNIS & CO., 2110 W. LAKE ST., CHICAGO, ILL.

184—Weatherstrips—“Dennis 1935 Spring Catalog,” an impressive handbook of 60 pages presenting a complete line of weatherstrip materials for doors and windows of all kinds, screen mouldings, K-D frames, curtain rod fixtures, plant stakes and other hardware specialties.

Hangers, Door—National Mfg. Co.—See item No. 187.

Hinges, Ornamental, Surface and Butt—National Mfg. Co.—See item No. 187.

Lead Headed Roofing Nails—Filshie Lead Head Nail Co., Inc.—See item No. 90.

EXTENSION GARMENT HANGER CO., DALLAS, TEX.

184A—Wardrobe Equipment—Information regarding the Hood extension garment hanger which increases the closet space in homes you build or modernize.

WILLIAM B. LUCKE, WILMETTE, ILL.

185—Tub Hangers—“Lucke Leak Proof Tub Hangers,” a 16-page catalog illustrating the Lucke system of hanging bathtubs in a practical, non-leaking way.

MONARCH METAL WEATHERSTRIP CO., 6333 ETZEL AVE., ST. LOUIS, MO.

186—Casement Lock and Check—“Casement Window Hardware,” a pamphlet

illustrating and describing the Monarch casement hardware which is a combined control lock, automatic stay and casement check.

NATIONAL MANUFACTURING CO., Sterling, Ill.

187—**Builders' Hardware**—“Catalog No. 23,” a 208-page general catalog illustrating and describing the complete National line of builders' hardware.

Over the Top Garage Door Equipment—Frantz Mfg. Co.—See item No. 200.

PROTEX WEATHERSTRIP MFG. CO., 2306 W. 69th St., Chicago, Ill.

188—**Weatherstrips**—“Catalog on Weatherstrip Materials and Equipment,” a 64-page illustrated catalog giving full information relative to the Protex line.

189—**Thresholds**—Illustrated folio on thresholds, edging, nosings, etc.; 16 pages.

RED CEDAR SHINGLE BUREAU, 4408 White Bldg., Seattle, Wash.

190—**Shingle Nails**—“The Right Nails for Red Cedar Shingle Roofs”; leaflet on hot dipped zinc coated nails with sizes recommended for various job conditions.

SAMSON CORDAGE WORKS, 89 Broad St., Boston, Mass.

191—**Sash Cord**—Standard specifications and information on Samson Spot Sash Cord give results of tests and include table of sizes.

THE SISALKRAFT CO., Chicago, Ill.

192—**Treated Sisalkraft**—Samples offered are self-demonstrating and describe and illustrate numerous applications.

193—**Copper Armored S'salkraft**—Samples offered demonstrate Anaconda's electrolytic copper backed up with the strength inherent in Sisalkraft.

THE STANLEY WORKS, New Britain, Conn.

194—**Builders' Hardware**—“Decide Now What Your Home Will Be Like in 1955,” a 36-page booklet for the consumer illustrating the application of builders' hardware throughout the home.

Staples for Screen Wire, Perf-O-Matic—J. B. Crofoot Co.—See item No. 318.

STARLINE INC., Harvard, Ill.

195—**Barn Equipment**—“Starline Complete Catalog No. 100”; valuable information on dairy barn equipment, including Starline stalls, stanchions, drinking cups, pens, hay tools, etc.; also Cannon Ball door track and hangers.

TIMBER ENGINEERING CO., 1337 Connecticut Ave., Washington, D. C.

196—**Timber Joint Connectors**—“TECO Connectors”; details showing the TECO system for strengthening timber joints and eliminating customary heavy hardware.

18. GARAGE DOOR SETS.

ALLITH-PROUTY MFG. CO., Danville, Ill.

197—**Upward-Acting Hardware**—“Forty Ninety Overhead Door Hardware”; folder showing 6 installation views.

198—**Round the Corner Hardware**—“Eleven Eighty Garage Door Hardware,” a folder illustrating track and hanger operation.

CORNELL DOOR WORKS, 3600 13th St., Long Island City, N. Y.

199—**Doors, Garage**—“Cornell Float-Over Doors,” folder illustrating installation of both wood and steel doors which can be operated by hand, chain or motor.

Garage Hardware, Hinged, Sliding and Folding—National Mfg. Co.—See item No. 187.

FRANTZ MFG. CO., Sterling, Ill.

200—**“Over the Top” Door Equipment**—“Over the Top Catalog”; 16 pages, fully illustrated, showing complete application of “Over the Top” equipment for new or old doors.

INTERNATIONAL STEEL CO., Evansville, Ind.

201—**Lift Door**—“International Lift Door, Easy to Raise, Easy to Lower,” an illustrated folder on equipment for private garages, service stations, markets, etc.

THE OVERHEAD DOOR CORP., Hartford City, Ind.

202—**Overhead Doors**—“Complete Catalog No. 16”; 24 pages of illustrations including practical construction details—jamb construction detail to receive the Overhead Door.

Information also available on Overhead Doors for automatic use in fire and police stations, and Overhead Door, hanger type, in wood or steel for airplane hangers.

NATIONAL MANUFACTURING CO., Sterling, Ill.

203—**Garage Sets**—Direction sheet and 4-page circular giving complete information and directions for erecting the No. 900 National Overhead Doors.

ROWE MANUFACTURING CO., 710 S. Holton St., Galesburg, Ill.

204—**Ro-Way Overhead Door**—New folder gives complete description, and specification of doors with 4 detail drawings and 16 illustrations; shows typical installations in private residence garages, gas and oil stations, and in commercial and industrial buildings of various sorts. The patented “Seal-Tite” Mold, an exclusive Ro-Way feature, is illustrated.

19. PLUMBING.

THE AMERICAN BRASS CO., Cook St., Waterbury, Conn.

205—**Copper Pipe**—“Anaconda Copper Tubes and Fittings,” 24 pages of valuable information and illustrations relating to the use of copper water tube and of solder and flared tube fittings.

THE JOHN VAN RANGE CO., Div. of The Edwards Manufacturing Co., 401 Eggleston Ave., Cincinnati, O.

206—**Sinks**—“Custom-Made Stainless Sinks,” a catalog presenting 6 different installation types (i.e. corner, multi-compartment, double drainboard, etc.), with specifications; engineering service available to architects and contractors.

L. J. MUELLER FURNACE CO., 2005 W. Oklahoma Ave., Dept. AB4, Milwaukee, Wis.

207—**Tank Heaters**—Leaflet gives complete rating and dimension tables covering both regular and combination garbage burning type hot water supply boilers.

READING IRON CO., 401 N. Broad St., Philadelphia, Pa.

208—**Wrought Iron Pipe**—“Bulletin No. 1” describes the process of manufacture and results obtained from the use of Reading genuine puddled wrought iron pipe.

WHITEHEAD METAL PRODUCTS CO. OF NEW YORK, INC., 304 Hudson St., New York City

209—**Monel Metal Sinks**—“Inco Standardized Monel Metal Sinks and Cabinet Tops,” a 24-page illustrated catalog showing the complete line of kitchen and pantry sinks and cabinet tops manufactured by The International Nickel Co., Inc., and distributed by Whitehead.

210—**Monel Metal Range Boilers**—“Whitehead Range Boilers,” a 16-page illustrated catalog presenting the line of range boilers and hot water storage tanks, gas and electric water heaters and water softeners, all in Monel Metal.

20. HEATING AND VENTILATING.

AMERICAN GAS PRODUCTS CORP., 40 W. 40th St., New York City

211—**Gas Fired Boiler**—“Ideal Gas Boilers,” a 15-page general catalog for heating contractors, engineers and property owners.

212—**Gas Fired Steam Radiator**—Information regarding the A.G.P. gas fired steam radiator with its four famous features.

213—**Gas Fired Space Heater**—Information regarding A.G.P. gas fired Unit-ors for heating “that cold room.”

AMERICAN SHEET AND TIN PLATE CO., Pittsburgh, Pa.

214—**Sheet Metal Flues**—“Steel Sheets Applied to Modern Construction,” a 24-page booklet describing American black and galvanized sheets for heating and ventilating, and air conditioning uses.

CLAY EQUIPMENT CORP., Cedar Falls, Ia.

215—**Barn Ventilation**—“Catalog No. 20”; 72 pages on gravity and electric ventilating systems for poultry, hog and cow barns.

THE EDWARDS MANUFACTURING Co., 401 Eggleston Ave., Cincinnati, O.

216—**Air Conditioning Furnaces**—“Edwards Hot-Kold Winter Air Conditioning,” a bulletin on gas-fired residence units providing complete winter air conditioning.

GAR WOOD INDUSTRIES, INC., Detroit, Mich.

217—**Oil Fired Air Conditioner**—“Beauty with Perfected Oil Heating,” an 8-page catalog in colors showing how Gar Wood restyles and modernizes warm air, oil heating and air conditioning.

218—**Conversion Oil Burner**—4-page folder on a new, lower priced Gar Wood oil burner. Information also available on a higher priced de luxe burner for economical oil heat.

219—**Oil Heat, Air Conditioning**—A 14-page catalog presenting Sweet's reprint, giving full details of the Gar Wood line, including the indirect air conditioning cabinet.

Gas Wall Heaters—Peerless Manufacturing Corp.—See item No. 255.

GENERAL ELECTRIC Co., 570 Lexington Ave., New York City

220—**G-E Oil Furnace**—“The Inside Story,” a 16-page consumer booklet covering principles, construction, operation and installation; 4 detail drawings.

221—**G-E Gas Furnace**—“General Electric Presents Its Latest Achievement, a Furnace for Gas”; complete consumer information, 12 pages; 2 detail drawings.

222—**G-E Air Conditioning System**—“It's in the Air,” a 16-page consumer booklet with many illustrations. Describes all units.

HEATILATOR Co., Syracuse, N. Y.

223—**Heatilator Fireplace**—“Heatilator—the Fireplace That Circulates Heat”; a 24-page illustrated booklet describing built-in form that eliminates smoking; makes fireplace an efficient heating unit.

THE MAJESTIC Co., 351 Erie St., Huntington, Ind.

224—**Warm Air Systems**—“Majestic Warm Air Furnaces and Air Conditioning Systems,” a 12-page book illustrating the Majestic line of modern heating and air conditioning equipment for the home.

L. J. MUELLER FURNACE Co., 2005 W. Oklahoma Ave., Dept. AB4, Milwaukee, Wis.

225—**Warm Air Furnaces**—Individual folders on both cast iron and steel Mueller furnaces for coal, oil, wood or gas burning. Specify which fuel and whether for gravity or forced air and air conditioning systems.

226—**Air Conditioners**—For central air conditioning systems incorporated with heating plant. Folders available on matched fan, air washer and air filter units, and popularly priced package units for average single family residences with or without air washer feature.

227—**Steam & Hot Water Boilers**—Folders on round jacketed and unjacketed cast iron steam and hot water boilers for coal or oil burning, or for gas-fired heating boilers.

228—**Registers**—“Mueller from the Ground Up”; folder illustrating registers, grilles, furnace pipe and fittings.

229—**Automatic Humidifiers**—Leaflet illustrating the Mueller automatic air moistener for warm air furnaces.

PEERLESS MANUFACTURING CORP., Louisville, Ky.

230—**Coal Stoker**—“Bulletin S 1,” 4 pages of photos, dimensions, costs and explanation of advantages of automatic coal heat.

READING IRON Co., 401 N. Broad St., Philadelphia, Pa.

231—**Charcoal Iron Boiler Tubes**—“Bulletin No. 1”; description of process of manufacture and of results obtained by use of this product.

H. H. ROBERTSON Co., Pittsburgh, Pa.

232—**Ventilators**—“Robertson Ventilation Data Book,” a 54-page catalog giving capacity tables based on actual tests at Mellon Institute, the first and most complete ventilator exhaust capacity tables in use.

Ventilators—The Edwards Manufacturing Co.—See item No. 104.

21. ELECTRICAL MATERIALS.

THE AMERICAN BRASS Co., Cook St., Waterbury, Conn.

233—**Non-Rust Metal Conduit**—“Everdur Electrical Conduit,” an 8-page booklet describing this new high strength copper alloy conduit (both EMT and Rigid) for use under corrosive conditions.

ARROW-HART & HEGEMAN ELECTRIC Co., 105 Hawthorn St., Hartford, Conn.

234—**Wiring Devices**—“Catalog No. 25, Arrow Wiring Devices,” a 57-page catalog giving a complete listing of electric switches, receptacles and wiring devices used in all types of buildings, including the Multi-coupler System of Radio wave distribution which provides one aerial for a plurality of radio sets.

235—**Electrical Fittings**—“H & H Wiring Devices, Catalog V,” a catalog presenting a most complete line of wiring devices, including many new numbers designed especially for more convenient living in modern wired homes and buildings of all types.

Electric Wall Heaters—Peerless Manufacturing Corp.—See item No. 254.

Switches, Electrical—Arrow-Hart & Hegeman Electric Co.—See item No. 234.

Outlets, Electrical—Arrow-Hart & Hegeman Electric Co.—See item No. 234.

22. REFRIGERATION.

23. ELEVATORS.

24. POWER PLANT.

D. W. ONAN & SONS, 815A Royalston Ave., Minneapolis, Minn.

236—**Electric Power**—“Onan Electric Plants for Use Remote from Electricity,” a folder describing models 350 to 2,000 watts, supplying the same current as furnished by power lines. Modern alternating current.

25. EQUIPMENT FOR BUILDINGS.

AMERICAN GAS PRODUCTS CORP., 40 W. 40th St., New York City

237—**Automatic Storage Water Heaters**—“A.G.P. Regular Automatic Gas Fired Storage Water Heater” is an 8-page general catalog for plumbers, engineers and property owners. Information also furnished regarding “The Dictator” water heater.

AMERICAN TELEPHONE & TELEGRAPH Co., 195 Broadway, New York City

238—**Telephones**—Information regarding telephone installation and service in buildings.

THE CINCINNATI FLY SCREEN Co., Dept. 17, Cincinnati, Ohio

239—**Screens, Window**—“Zip-in Frameless Fly Screens,” described in a well illustrated 4-page folder.

CLAY EQUIPMENT CORP., Cedar Falls, Ia.

240—**Barn Equipment**—Large, well illustrated catalog on barn construction and barn equipment, including stanchion stalls, mangers, water bowls, overhead carriers, hay tool equipment, etc.

COLUMBUS COATED FABRICS CORP., Columbus, O.

241—**Washable Window Shades**—Information regarding the Bontex washable window shades with samples.

Fireplace Unit—Heatilator Co.—See item No. 223.

EXTENSION GARMENT HANGER Co., Dallas, Tex.

241A—**Wardrobe Fixture**—Information regarding the Hood extension garment hanger for increasing space in clothes closets.

GAR WOOD INDUSTRIES, INC., Detroit, Mich.

242—**Oil Fired Water Heater**—4-page circular on the Gar Wood automatic oil fired water heater for stores, apartments, restaurants, clubs, laundries, garages.

GENERAL ELECTRIC Co., Section CW, Nela Park, Cleveland, O.

243—**General Electric Kitchen**—“Planning a General Electric Kitchen,” a 27-page book profusely illustrated with specimen plans, specifications, layouts, product illustrations. Also sales ideas.

THE MAJESTIC CO., 351 Erie St., Huntington, Ind.

244—Coal Chutes—“Majestic Building Products for Homes of Character,” a 24-page book full of interesting illustrations and detailed information to help the owner, contractor, architect or dealer build quality, permanence and personality into homes.

245—Fireplace Dampers—“Majestic Fireplace Damper Circular,” an illustrated circular containing valuable information on how to build successful fireplaces.

246—Garbage Receivers, Underground—“A Sure Cure for Garbatosis,” a circular suggesting an answer to the garbage disposal problem and how the beauty of the garden may be preserved.

MARSCHKE CO., St. Paul, Minn.

247—Disappearing Stairs—Information regarding the Marco folding stairway.

MILCOR STEEL CO., 4111 W. Burnham St., Milwaukee, Wis.

248—Milk & Package Receiver—“Milcor Milk & Package Receiver,” a 4-page illustrated circular showing design and installation of 2 sizes for walls from 5 to 14 inches thick.

249—Clean-out Doors—“Milcor Flue or Clean-out Door,” leaflet presenting the 3 sizes of Milcor steel clean-out doors.

Monel Metal Range Boilers—The International Nickel Co., Inc.—See item No. 210.

Monel Metal Sinks—The International Nickel Co., Inc.—See item No. 209.

L. J. MUELLER FURNACE CO., 2005 W. Oklahoma Ave., Dept. AB4, Milwaukee, Wis.

250—Incinerators—Leaflet covering double duty type Mueller garbage burning boiler for year round hot water supply.

THE OVERHEAD DOOR CORP., Hartford City, Ind.

251—Electric Door Openers—Information regarding the Overhead Door electric control for every type of door.

PEERLESS MANUFACTURING CORP., Louisville, Ky.

252—Dome Dampers—“Bulletin BS-1,” 8 pages of photographs and drawings showing how to improve chimney efficiency and construction.

253—Coal Windows—“Bulletin BS-1,” leaflet giving photograph, description and dimensions.

254—Electric Wall Heater—“Bulletin 500,” data on usage, finish and dimensions.

255—Gas Wall Heaters—“Bulletin W.H.,” leaflet showing installation, finishes and dimensions.

THE READYBUILT PRODUCTS CO., Baltimore, Md.

256—Fireplaces—“Readybuilt Fireplaces”; folder illustrating a large variety of attractive fireplaces shipped complete anywhere ready to install, used with gas or electric heat.

257—Stone Mantels—“Reprep Period Stone Mantels,” a folder illustrating authentic reproductions of period caen-stone mantels, used with wood burning fireplaces.

Stokers, Coal—Peerless Manufacturing Corp.—See item No. 253.

26. INSULATION.

Bat Insulation—Johns-Manville Corp.—See item No. 91.

THE CELOTEX CO., Chicago, Ill.

258—Celotex Insulating Cane Board—“You Need Celotex”; 20-page booklet on the insulating, decorating and building values of Celotex for homes, farm buildings and vacation cottages.

THE EAGLE-PICHER LEAD CO., Temple Bar Bldg., Cincinnati, O.

259—Eagle Home Insulation—“Do Your Friends Like To Come to Your Home?”, large booklet tells complete story of Eagle insulation. How any home, large or small, can be made as much as 15 degrees cooler in summer and easier to heat in winter with 40 per cent less fuel.

THE INSULITE CO., Minneapolis, Minn.

260—Insulite Fibre Board—“Make Your Home Comfortable, Convenient, Enjoyable,” a colorful, descriptive 6-page folder that describes the application of Insulite to the home.

JOHNS-MANVILLE CORP., New York City

261—Mineral Wool—Home insulation brochure “Fair and Warmer,” gives complete details on home insulation for old homes and new; illustrated.

262—Bat Form Rock Wool—“New Scientific Discovery,” explains home insulation and describes J-M bat form of Rock Wool.

Reinforced Building Paper—The Sisal-kraft Co.—See item No. 192.

Stained Shingles—Weatherbest Corp.—See item No. 22.

THE STANDARD LIME & STONE CO., Baltimore, Md.

263—Capitol Rock Wool Blowing Fibres and Bats—“The Story of America’s Greatest Advance in Home Comfort”; 8-page catalog giving the story of modern insulation, with illustrations showing how and where it is applied.

WOOD CONVERSION CO., St. Paul, Minn.

264—Balsam Wool Blanket and Nu-Wood Insulating Board—“A Cool House in Summer,” an attractive booklet, well illustrated, showing why and how to use adequate insulation in home building.

27. ACOUSTICS.

Wood Conversion Co., St. Paul, Minn.

265—Wood Fibre Tile—“Acoustical Treatment for Modern Interiors,” a folder presenting Nu-Wood Bevel-Lap tile.

28. FINANCING.

THE PHILIP CAREY CO., Lockland, Cincinnati, Ohio

266—Low Cost Finance Plan—Information regarding the Philip Carey time payment plan for re-roofing and modernizing.

JOHNS-MANVILLE CORP., New York City

267—Financing Plan—“Johns-Manville \$1,000,000 to Lend Home Improvement Plan” gives complete details of the J-M deferred payment plan which permits home owners to finance home improvements at government rates.

WEYERHAEUSER SALES CO., St. Paul, Minn.

268—Money for Modernizing—Weyerhaeuser Finance Plan is fully explained in new catalogs and bulletins detailing a complete process.

29. CONTRACTORS' EQUIPMENT.

THE AMERICAN FLOOR SURFACING MACHINE CO., 511 S. St. Clair St., Toledo, O.

269—Floor Sanders—“American Sanding Machines”; several new specification folders illustrating current models of the American Light Eight floor sander, and the American High Production floor sander.

270—Edge & Stair Sanding Machine—“The American Spinner,” a new folder giving complete information on efficiency and speed in finishing floor edges and stairs with new, compact disc type sanders.

AMERICAN SAW MILL MACHINERY CO., Hackettstown, N. J.

271—Contractors' Woodworking Machinery—“Bulletin No. 82,” presenting line of belt and power driven combination woodworkers, saw benches, rip and cut-off saws, hoists, etc.

272—Shop Equipment—Special bulletins and circulars on motorized or belt driven saw benches, band saws, jointers, mortisers, planers, sanders, shapers, lathes, etc.

Brick Manufacturing Equipment—W. E. Dunn Mfg. Co.—See item No. 62.

C. H. & E. MANUFACTURING CO., INC., 120 E. Mineral St., Milwaukee, Wis.

273—Combination Woodworker—“Home Builder Jr.—a Light Portable Combination Woodworker,” an 8-page illustrated circular presenting large illustrations, complete description and specifications of this equipment.

274—Centrifugal Pumps—“C. H. & E. Self-Priming Centrifugal Pumps”; 8-page illustrated catalog with large illustrations giving complete information.

CHEVROLET MOTOR CO., Detroit, Mich.

275—Chevrolet Trucks—Complete information regarding the 1935 6-cylinder valve-in-head engine trucks, “the world’s lowest priced trucks.”

COLORCRETE INDUSTRIES, INC., 500 Ottawa Ave., Holland, Mich.

276—**Molds for Ornamental Concrete**—“Colocrete Molds and Equipment,” a 24-page catalog showing equipment for making garden furniture, flagstones, urns, also treatise on opportunities for profits in this business.

277—**Concrete Mixers**—“Equipment for the Manufacturer of Concrete Specialties,” a 24-page illustrated catalog showing mixers for handling semi-dry and plastic mixtures; sizes for all mixing needs.

278—**Concrete Pipe Molds**—“Catalog No. 22,—Molds for Sewer and Culvert Pipe,” a 24-page catalog, illustrated, containing specifications and prices of molds for pipe making from 10 to 42 inches in diameter.

DELTA MANUFACTURING CO., 3775 N. Holton St., Milwaukee, Wis.

279—**Portable Woodworker**—Catalog illustrating complete line of circular, band and scroll saws; jointers, lathes, drill presses and accessories; 48 pages.

280—**Circular Saws, Portable**—Catalog No. 860 presenting 8" tilting-table circular saw with capacity for ripping to center of 48" panel. Crosscuts 2½" x 10" stock adapted for dadoing and moulding.

DEWALT PRODUCTS CORP., 247 Fountain Ave., Lancaster, Pa.

281—**Power Woodworker**—“Saves Money, Labor and Erection Time,” a pamphlet on the DeWalt Wonder Worker for builders, describing results gotten by thousands of builders.

282—**Tools and Attachments**—“DeWalt Wonder Worker Attachments,” a 12-page catalog of special knives for dadoing, tenoning, shaping, routing, jointing, mortising, etc.

283—**Metal and Stone Cutting**—“DeWalt Cutting Machines,” utilized as brick, stone and metal cutting machines, full information in new 16-page bulletin.

DREADNAUGHT SANDERS, Dept. A-435, Muskegon, Mich.

284—**Floor Sanders**—Information regarding the 1935 electric power sanders and the depression-tested rental plan now offered.

Electric Hand Tools—Skilsaw, Inc.—See item No. 322.

Equipment for Roofing Tile Manufacturers—W. E. Dunn Mfg. Co.—See item No. 88.

FIRESTONE TIRE AND RUBBER CO., Akron, O.

285—**Truck Tires**—Information regarding the Firestone line of truck tires, batteries, brake linings, spark plugs, etc.

FORD MOTOR CO., Dearborn, Mich.

286—**Motor Trucks**—“Ford V-8 Trucks and Commercial Cars,” an attractive rotogravure piece showing complete line of commercial vehicles.

GEIER & BLUHM, INC., 670 River St., Troy, N. Y.

287—**Contractors' Levels**—Circular G features the builders' and contractors'

convertible level, contains a large colored illustration showing the complete outfit, and list of important features and advantages.

GENERAL MOTORS TRUCK CO., Pontiac, Mich.

288—**Motor Trucks and Trailers**—“1935 GMC Trucks”; complete illustrated details of latest models of General Motors trucks and trailers.

289—**Profitable Deliveries**—“New Profits in Delivering Building Materials”; report of a nation-wide survey of building supply dealers' trucking operations.

INTERNATIONAL HARVESTER CO. OF AMERICA, 606 S. Michigan Ave., Chicago, Ill.

290—**Motor Trucks**—Complete assortment of well illustrated catalogs presenting the International line of ½-ton, ¾-ton, 1-ton, 1½-ton, 2-ton, speed delivery trucks, all 6-cylinder models; also presenting the International 3, 4 and 5-ton 6-cylinder highway transport trucks; also presenting the heavy-duty trucks, models A-7, A-8 and W-2; information here on trucks for every haulage need.

291—**Industrial Tractors**—“Push, Pull, Haul, Hoist with McCormick-Deering Industrial Power,” a 32-page catalog suggesting many profit-saving uses in contracting and other industries for International power units. Line includes both wheel type tractors and crawler type TracTracTors.

JAEGER MACHINE CO., Columbus, Ohio

292—**Concrete Mixers**—Information regarding Jaeger line of tilting mixers and of non-tilt mixers.

293—**Self Priming Pumps**—36-page catalog on Jaeger pumps.

294—**Truck Mixers**—32-page catalog presenting Jaeger line of truck mixers.

295—**Hoists**—Informative bulletin on Jaeger gasoline hoists.

296—**Concrete Chuting & Placing Equipment**—48-pages of information on this subject, describing Jaeger products.

KOEHRING CO., 3026 W. Concordia Ave., Milwaukee, Wis.

297—**Mixers**—Bulletins giving complete information on the Koehring line of concrete mixers, including sizes 5-S, 7-S, 10-S and 14-S, together with other Koehring equipment for contractors.

KWIK-MIX CONCRETE MIXER CO., Port Washington, Wis.

298—**Mixers**—“Kwik-Mix Mixers,” a 16-page illustrated catalog presenting the complete line in sizes 3½S to 10S.

LINCOLN-SCHLUETER FLOOR MACHINERY CO., 222 W. Grand Ave., Chicago, Ill.

299—**Machines, Floor Sanding**—“Speed-O-Lite Floor Surfacing Machine”; special folder giving complete detailed description and construction data of light weight, high speed sander.

300—**Surfacing, Floor**—“The Improved Schleuter,” a folder, illustrated, gives sizes, models and all specifications of the heavy duty line of sanding and resurfacing machines.

L. J. MUELLER FURNACE CO., 2005 W. Oklahoma Ave., Dept. AB4, Milwaukee, Wis.

301—**Forced Air Space Heaters**—Circular or gas fired unit space heaters for contractors' temporary heating requirements for winter construction.

NATIONAL POTTERIES CO., Room 25, 424 Second Ave. So., Minneapolis, Minn.

302—**Pottery Making Equipment**—“National-Lithoglace System of Concrete Pottery Manufacture”; 12-page illustrated booklet describing system for making glazed concrete garden pottery under patent license.

D. W. ONAN & SONS, 815A Royalston Ave., Minneapolis, Minn.

303—**Onan Safety Saw**—Information regarding power circular saw which handles cross cutting, ripping and mitering.

PARKS WOODWORKING MACHINE CO., 1542 Knowlton St., Cincinnati, Ohio

304—**Power Woodworkers**—“Accept These Helping Hands”; well illustrated catalog showing complete line of up-to-date woodworking machinery for contractors, builders and lumber dealers.

PORTER-CABLE MACHINE CO., 1702 N. Salina St., Syracuse, N. Y.

305—**Belt Sander**—“Save Hand Planing, Scraping and Sanding,” an 8-page booklet describing and illustrating some of the many jobs a Take-About sander will do for you.

306—**Speedmatic Floor Sanders**—“The Right Way to Do Floors” describing features of Speedmatic floor sanders that let contractors bid less and make more.

THE REID-WAY CORP., 2901 1st Ave., Cedar Rapids, Ia.

307—“8” Floor Sander—“A New Record in Floor Sanding Production,” an 8-page circular giving comparison of production from an entirely new angle.

308—**Whirlwind Sander**—Information regarding 6" all-purpose sander for bench work, table tops and floor work.

309—**Floor Ace**—Information regarding the new 6" light weight floor sander in the medium production class.

RELIABLE JACK CO., 1401 W. Second St., Dayton, O.

310—**Scaffold Brackets**—Information regarding the Reliable line of Scaffold brackets.

REO MOTOR CAR CO., Lansing, Mich.

311—**Motor Trucks**—Information regarding the 1935 models, Reo Speed Wagons and Motor Trucks.

SPEEDWAY MFG. CO., 1834 S. 52nd Ave., Cicero, Ill.

312—**Portable Electric Tools**—“Portable Electric Speedway Tools,” a 28-page catalog showing various uses for elec-

tric drills, hammers, saws, etc., comprising the Speedway line.
Stanley Electric Hand Tools—The Stanley Works—See item No. 324.

WARREN-KNIGHT Co., 136 N. 12th St., Philadelphia, Pa.

313—Transits & Levels—“Catalog of 64 pages showing designs and construction of modern instruments.

314—Instruction Book—“How to Use the Sterling Convertible Wye Level,” a 52-page instruction book on adjusting a level, reading the vernier, and instructions on how to solve six basic everyday problems.

315—Drafting Machines—“Wright Drafting Devices,” a bulletin showing 16 new models of low priced portable drafting machines that will save time for contractors and builders in making drawings.

DAVID WHITE Co., Milwaukee, Wis.
316—Levels and Transits—Information regarding the David White instruments.

30. MECHANICS' TOOLS.

R. L. CARTER DIVISION, The Stanley Works, New Britain, Conn.

317—Carter Door Set—“Cut Costs, Make More Profit”; circular describing hinge butt router, lock mortiser, electric plane and templets; profit possibilities in these electric portable tools for carpenters hanging doors.

J. B. CROFOOT Co., P.O. Box 783, Chicago

318—Screen Tacker—Circular giving full information regarding Crofoot No. 658 Screen Tacker. “Draw with the claw and tack with a whack” is the principle on which this useful tool operates. Crofoot Perf-O-Matic screen staples also offered.

DEWALT PRODUCTS CORP., 247 Fountain Ave., Lancaster, Pa.

319—Electric Hand Saws—“Power in One Hand,” a new illustrated booklet describing results secured by using DeWalt-Wodack electric hand saws.

KIMBALL MANUFACTURING CO., INC., 1714 Roseland, Royal Oak, Mich.

320—Wallboard Beveling Tool—Information regarding “Bevil-Devil,” a handy tool of proved value for beveling, slicing and grooving all insulation boards.

PORTER-CABLE MACHINE CO., 1702 N. Salina St., Syracuse, N. Y.

321—Electric Hand Saw—“Cut Days Off Contracts” illustrates and describes uses on which Speedmatic electric hand saw makes substantial savings.

SKILSAW, INC., 3314 Elston Ave., Chicago, Ill.

322—Electric Hand Saws, Drills & Sanders—“General Catalog No. 16” presents the complete Skilsaw line with many pictures taken on the job, showing the use of each tool in construction practice, meeting requirements on wood, metal, stone and compositions.

SPEEDWAY MFG. CO., 1834 S. 52nd Ave., Cicero, Ill.

323—Electric Tools—“Speedway Portable Electric Tools,” a 32-page vest pocket handbook presenting electric drills, screw drivers, nut tighteners, electric hammers, hand saws and groovers.

THE STANLEY ELECTRIC TOOL DIVISION, The Stanley Works, New Britain, Conn.

324—Electric Wood Saws, Portable—“Catalog No. 64M,” a 48-page catalog illustrating and describing a line of 46 quality electric tools and accessories, including electric hand saws, electric hammers, electric drills, electric grinders, both bench and portable, and electric stone saws.

WARREN-KNIGHT Co., 136 N. 12th St., Philadelphia, Pa.

325—Lettering Guides—“Wrico Lettering Guides”; catalog and 8 pages of charts showing various sizes and styles of lettering, with guides for lettering plans.

326—Drafting Equipment—“Progress in Drafting”; 8-page booklet of information on a real advance in the technique of drafting.

327—Electric Pen & Pencil—A folder of information on the use of electric pen for marking wood tools and leather equipment.

31. SPECIAL SERVICES.

ALLMETAL WEATHERSTRIP CO., Chicago, Ill.

328—Weatherstrip Opportunities—A weatherstripper's sales kit is offered to ambitious carpenters and builders who want to push weatherstrip selling and installing as a business.

AMERICAN TECHNICAL SOCIETY, Dept. G433, Drexel Ave. at 58th St., Chicago, Ill.

329—Building Books—A 4-page folder describing a 5 volume set of Architecture, Carpentry and Building books, a standard set for home study and reference purposes.

330—Home Study Books—“Practical books for Schools, Libraries and Home Study,” a valuable list for ambitious building men.

ARKANSAS SOFT PINE BUREAU, Little Rock, Ark.

331—House Designs—“Houses of Wood for Lovers of Homes,” a beautiful brochure presenting many well designed home suggestions by prominent architects.

Garden Pottery Manufacture—National Potteries Co.—See item No. 302.

INTERNATIONAL STEEL CO., Evansville, Ind.

332—Engineering Service—“Supplement 22” describes the International Service covering roof and truss construction, store front construction and all engineering matters having to do with International Steel products.

PITTSBURGH PLATE GLASS CO., Pittsburgh, Pa.

333—Opportunity—“Your Stake in the National Housing Act”; a 12-page brochure presenting a safe and sensible plan for improving homes and other property—profit ideas here for enterprising builders.

PORTER-CABLE MACHINE CO., 1702 N. Salina St., Syracuse, N. Y.

334—Profits in Floor Work—Information regarding the Porter-Cable Disc Edger showing how to match edges of floors, stair treads, etc., with centers without back-breaking handscrewing. Opportunity for contractors.

STARLINE INC., Harvard, Ill.

335—Poultry Equipment Catalog—Information regarding profitable poultry raising and Starline poultry equipment.

336—Barn Plans—Information regarding the layout and equipment of barns and stables for efficiency and profit.

American Builder,
105 W. Adams St.,
Chicago, Ill.

(April, 1935)

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